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# HARVARD BUSINESS REPORTS

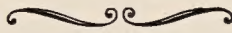
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VOLUME 9

CASES ON INDUSTRIAL MARKETING

WITH INTRODUCTION AND COMMENTARIES

BY

MELVIN THOMAS COPELAND

*Professor of Marketing*

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## EDITOR'S FOREWORD


The cases in this volume, all of which deal with the marketing of industrial goods, serve to supplement those in Volume 6 of the series, which was devoted to the same subject. Occasional cases on this subject have been included, with cases on other matters, in earlier volumes of the Reports; but Volume 6 and the present volume represent an organized collection of industrial marketing case materials.

Each case in this volume is followed by a commentary written by Professor Melvin T. Copeland, under whose supervision the cases were collected. An introductory survey chapter by Professor Copeland is prefaced to the cases.

In order to allow the results of the School's case research programs to be made available more promptly than before, and to facilitate the ready use of the Reports, it has seemed desirable to reduce the size of the volumes. The present volume is somewhat shorter than the earlier ones, and it is expected that subsequent volumes will follow the same plan.

CHARLES I. GRAGG.

October, 1930.



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<sup>1</sup>With the exception of a few cases, fictitious names have been used for the purpose of disguise.

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HARVARD BUSINESS REPORTS

VOLUME 9





# HARVARD BUSINESS REPORTS

## CASES ON THE MARKETING OF INDUSTRIAL GOODS

### INTRODUCTION<sup>1</sup>

Alertness in marketing manifests itself first in a comprehension of the market to be served. It manifests itself secondly in an understanding of the motives which induce users or consumers to buy a particular product or to patronize a particular firm. Its third manifestation appears in the adaptation of the product or service to the requirements of the market. Then follow the selection of channels of distribution, the setting up of an effective marketing organization, the recognition of responsibility for guiding and aiding salesmen, the formulation of plans for sales promotion and advertising—if the product is advertisable, the determining of brand and trade-mark policies, and finally, the adoption of price policies which not only will assure a profitable return to the business, but aid actively in sales promotion as well.

“Goods well made are half sold,” to paraphrase an old adage; but the selling is fully as important as the making. Profits can be reaped only when the marketing of the goods is completed and when it is done effectively. These statements hold as truly for industrial goods as for consumers’ goods.

An alert manufacturer, in arriving at an understanding of his market, ascertains just where his particular market lies, what the requirements of each segment of the market are, what its limitations are, and where latent demand exists. A good example of success in the location of a potential market is furnished by the experience of a company which was manufacturing a variety of industrial products. As a result of careful study of the opportunities for selling products of the general type that it was making, the company decided that its best markets lay among public

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<sup>1</sup> Adapted, with permission of the publisher, from a series of articles by Melvin T. Copeland in *Advertising & Selling*, New York, Vol. IX, No. 12, to Vol. XI, No. 7.

utility companies and mining companies. Accordingly the company is specializing on five classes of products which can be sold in those markets. This company is more prosperous than some of its competitors which are following a promiscuous marketing program.

Another example of the discovery of limitations to a market is furnished by the Standard Conveyor Company. In an article published in *System* in November, 1926, Mr. H. L. Donahower, president of that company, stated that, until within a year of the time when he was writing, his company maintained a list of over 120,000 prospective customers. When the sales promotion manager of the company began to examine this list, he concluded that many of the so-called prospects were not operating on a large enough scale to require use of elaborate conveyor installations. As a result of the sales promotion manager's analysis, which extended over about a year's time, the company reduced the prospective customers on its list from over 120,000 to 39,000. This determination of the limitations of the potential market undoubtedly was of great assistance to the company in laying out an effective marketing program and in avoiding wasteful sales effort.<sup>2</sup>

### *Characteristics of the Industrial Market*

Many companies manufacturing both industrial and consumers' goods have suffered from failure to differentiate between the industrial market and the consumers' market. In numerous instances they have used the same sales organizations in selling to industrial buyers as they have used in selling to wholesale and retail merchants, with the result that sales for industrial purposes often have been poorly handled; salesmen who are concerned primarily with selling to wholesalers or retailers tend to lack interest in the industrial market and seldom understand how to talk to large industrial buyers.<sup>3</sup> Even those companies which maintain separate salesforces for the industrial market commonly have not adapted their sales plans to the special needs of that market, apparently because they have failed to comprehend the characteristics which differentiate the industrial market from the market for consumers' goods.

<sup>2</sup> See Vaiden Chemical Company, p. 51; Hamerton Company, p. 93; also Erven Leather Products Company, 6 H.B.R. 3.

<sup>3</sup> See Pollock Company, Inc., p. 231; Crouchley Manufacturing Company, p. 234.

This fact of differentiation between the market for consumers' goods and the industrial market is one of the basic considerations in marketing. One essential difference is that for industrial goods the market can be more clearly defined than can the market for consumers' goods. For practically every item that is distributed for use by individual consumers there are large numbers of potential or actual customers, who are widely scattered and whom the manufacturer must approach *en masse*. For industrial goods, on the other hand, the market generally is confined within narrower and better defined limits, and a more highly specialized approach is required.

There are wide variations, to be sure, in the definiteness of the market for different industrial goods. Commercial stationery, for example, is an industrial good which finds a market in all industries and among firms of all sorts, whether large or small. Valves, to cite another example, have a market in a large number of industries, including all the process industries and various others. The market for drying machines likewise cuts across numerous industries. Ore crushers, on the other hand, can be sold only to mining companies. In any case, prospective customers tend to be fewer for industrial goods than for consumers' goods and to be more readily located.

There are other contrasts between the two types of markets. For most sorts of industrial goods the unit of purchase by the user is much larger than the unit of purchase for consumers' goods. A manufacturing company purchases a fleet of motor trucks, whereas the family buys a single automobile. A steam turbine represents a large investment. Paint is bought by the barrel by many industrial users, whereas domestic consumers purchase in quart cans. In numerous instances purchasers of industrial goods require special engineering or designing advice, a service which is possible only with large unit sales.

In analyzing the industrial market, I have found it helpful to use the following subclassification of industrial goods.<sup>4</sup>

1. Installations
2. Accessory equipment
3. Operating supplies
4. Fabricating parts

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<sup>4</sup> See Melvin T. Copeland, *Principles of Merchandising*, pp. 130-154.



5. Fabricating materials
6. Process materials
7. Primary materials

Installations constitute the major equipment of a plant, such as rubber calenders, woolen cards, steel furnaces, and steam generators. The selection of such equipment is governed by the product which is to be turned out in the plant or by the nature and scope of the operations to be performed. The market for installations is one in which repeat demand is infrequent. Such equipment is bought only for a new or enlarged plant or for replacements in an existing plant. Its purchase requires capital expenditure and is governed in large measure by general conditions in the particular industry in which the equipment is to be used. In the sale of installations, engineering and designing service is of special importance. The higher plant executives usually determine the purchase of such equipment. These executives belong to what has been termed a vertical buying group, composed of men who are concerned primarily with the operation of an entire plant, as a unit in a particular industry, in contrast to what is called a horizontal buying group, made up of men concerned with particular plant functions common to many industries.<sup>5</sup>

Accessory equipment is the auxiliary or supplementary equipment of a plant; it serves to facilitate the operation of the installations, to aid in carrying on administrative and auxiliary services, and to assist in the performance of other, miscellaneous tasks. Examples of accessory equipment are small motors, tools, time clocks, conveyors, factory trucks, and steel shelving. The market for an item of accessory equipment cuts across many industries. In approaching his market, therefore, it is necessary for a manufacturer of accessory equipment to ascertain the types and sizes of firms which are potential purchasers, and to exclude from his sales program those firms which are too small to use such products as the company produces. In the market for accessory equipment, unlike that for installations, the buyers usually are of a horizontal buying group. Decisions regarding the type of accessory equipment to be purchased seldom reach the chief executives except in small companies.

The third subgroup of industrial goods, operating supplies, includes supplies which are necessary for the continuous operation

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<sup>5</sup> McGraw-Hill Publications, *Industrial Marketing at Work*, pp. 28-33.

and maintenance of a plant, store, or office, but which do not enter directly into a manufactured product. Lubricants, paint for maintenance purposes, cleaning compounds, accounting books and forms, and packings for pumps and valves are examples. Such supplies are used up continually and are replenished with more or less frequency and regularity. They are indispensable to the operation of a plant, but the market for them has quite different characteristics from those of the markets for equipment or for materials from which the products are made.

Operating supplies usually are bought by purchasing agents, with or without specifications by plant superintendents or other executives of similar rank. The purchasing of operating supplies is seldom a matter with which the chief executive of a company concerns himself. The buyers of this class of industrial goods belong in a horizontal group and are analogous in that respect to the buyers who control the purchases of accessory equipment.

Fabricating parts are manufactured articles which are incorporated without modification by the fabricator, with other materials or parts, in completed products. These fabricating parts range all the way from pressed metal parts used in the manufacture of electric meters and calculating machines to glass insulators and containers, bearings for railway cars, motors for vacuum cleaners, trolley catchers, engines for concrete mixers, and automobile bodies.

The market for fabricating parts is essentially a vertical market, that is, a market by industries rather than by functions extending through diverse industries. For a fabricating part like an automobile body, the market is found only in a single industry. A company manufacturing pressed metal parts, on the other hand, finds its market in a series of industries, but the purchases in all cases are made with reference to the special requirements of each industry.

When fabricating parts are purchased on a long contract, the contract usually is subject to approval by a high official in the fabricating company. The type of parts to be used and the specifications for the parts, however, are determined by the men who design the products into which the parts are to go. When the parts are highly specialized, the decision by the men who determine the product design usually governs the source from which the parts are to be purchased. In other instances, where

the fabricating parts are not highly specialized and where similar parts can be secured from several sources, the selection of the particular source from which the articles are to be bought is usually left to the purchasing organization.

In marketing fabricating parts the producer in many instances encounters problems, not only of influencing fabricators to purchase his parts for use in their products, but also of stimulating ultimate users to demand products into which parts of his manufacture have entered. This is exemplified by the consumer advertising of manufacturers of automobile bodies.

Fabricating materials, like fabricating parts, are manufactured articles which become part of other manufactured articles. Fabricating materials, however, undergo physical modification or change in the further process of manufacturing, whereas fabricating parts do not change their form or require processing by the fabricator. Examples of fabricating materials are steel plates and rods, lumber, copper wire, wool tops, worsted cloth, leather, flour, and book paper.

The market for fabricating materials is a vertical market, by industries. Some fabricating materials find use in various industries, as, for example, copper wire, but for many materials the market is confined to a single industry, as in the case of wool tops.

In marketing both fabricating parts and fabricating materials it is essential for the manufacturers to heed the points of view of the men who control the product designs as well as the points of view of the men who actually make the purchases. For fabricating materials the specifications are determined by the men in the fabricating organization who control the design of the completed product. Once the specifications are drawn up, however, it is common practice for the purchasing of fabricating materials to be handled in a routine manner.

In a few instances manufacturers of fabricating materials have undertaken to have the identity of their products maintained after fabrication; for example, Armco iron and Skinner satin. Such practice is exceptional at the present time. The difficulty of devising a means for the permanent identification of fabricating materials limits the opportunities for advertising and sales promotion work for such goods. Here lie some of the major unsolved problems in several industries.



Process materials, the sixth subgroup, like fabricating materials enter into the finished product or directly affect its composition. Process materials, however, commonly undergo chemical change, whereas fabricating materials usually undergo physical change. Examples of process materials are soda used for the manufacture of wood pulp, muriatic acid for pickling iron and steel, and sulphate of ammonia for the manufacture of scouring compounds. The nature of the market for process materials is essentially the same as that of the market for fabricating materials. The chief reason for differentiation between the two is that it is next to impossible to retain the identity of the make of a process material after it has entered the process, thus foreclosing to the producer of process materials opportunities for sales promotion which at least some manufacturers of fabricating materials can utilize. These circumstances, however, do not lessen the need for alertness in marketing process materials, by giving individuality to a business through the development of a reputation for dependability in quality, sales service, or other means.

Primary materials include such items as raw wool, hides, wheat, crude rubber, furs, raw sugar, and sulphur. The raw material markets have characteristics of their own which differentiate them not only from the markets for consumers' goods, but also from the markets for other industrial goods. For each primary material special marketing methods have been developed which are adjusted to meet the conditions of production as well as the conditions of consumption.<sup>6</sup>

For primary materials the markets are vertical, each material being sold to a single industry or to a definite series of industries.

The purpose of the foregoing classification of industrial commodities is not to set up closed compartments, but rather to facilitate comparisons of marketing methods. It is through comparisons of the types of marketing and of the marketing methods for different classes of commodities that we can best ascertain why particular methods are effective under one set of circumstances and not under other circumstances. It is through analyses which start with such classifications that the most economical and the most effective methods of marketing specific articles can be ascertained.

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<sup>6</sup> See New York Hide and Skin Exchange, Incorporated, p. 330.

The examples that have been cited show the necessity of ascertaining whose decisions govern the purchases of a particular type of article in order that the sales message may be addressed properly. The difference between horizontal and vertical markets is particularly significant in ascertaining not only where the potential market for a particular product exists, but what the characteristics of the market are and how it should be approached.

### *Characteristics of the Industrial "Buyer"*

For alert marketing one of the key questions which the seller must keep constantly in mind is:—"Why should merchants or users purchase my goods?"—or, "Why should they patronize this company?"

In passing along a busy street a man may buy a pencil or a pair of shoe strings from a blind beggar, but that is not business; yet there are blind beggars in business who hold out their wares to passers-by without first having asked themselves the questions:—"What do the customers for such goods as I have to offer want?"—"Why do they purchase?"—or, in other words, "What are their buying motives?"

Industrial goods, unlike consumers' goods, are bought for business purposes. The industrial buyer is not seeking to please his own fancy, but rather to buy equipment and materials which will aid him in selling his goods at a profit or in reducing his operation costs. Since industrial goods are bought for business purposes, the buying motives are predominantly rational motives. This affords a contrast to the market for consumers' goods, where emotional motives often predominate. It is true that emotional motives, as, for example, style preference, have an influence on the market for industrial goods, but the industrial buyer recognizes the style factor and coolly calculates the style trend, whereas the individual consumer buys many articles on the impulse of his fancy.

The buying motives for industrial goods differ between products and also between segments of the market for a particular product. Some of the strongest industrial buying motives, applicable to various types of goods and in various markets, are: *Enhancing Salability of Product; Economy in Use; Protection against Loss; Durability; Facilitating Plant Operations; Dependability in Use; Dependability in Quality; Welfare of Employees;*

*Punctuality in Delivery; Promptness in Delivery; Reputation and Special Services of Seller.*<sup>7</sup>

The potential buyers of any industrial good usually include establishments of various sizes and with differing types of organizations. Therein lie some of the toughest snags in industrial marketing. Take the market for motor trucks, for example. As one segment of the market we find numerous small contractors, proprietors of retail shops, local truckmen, and small manufacturers, each of whom operates only one or two trucks. Another segment of the market includes metropolitan department stores, large construction companies, and large manufacturing companies, each operating a fleet of trucks. A company which operates a fleet of trucks usually has a special department for supervising maintenance and operation, and the purchase of new trucks is a subject with which not only the head of that department but also a purchasing agent and other executives of the company are concerned. The one-man business buys without red tape but it usually buys only one truck at a time and perhaps with prolonged deliberation. The large company buys greater numbers of trucks and buys more frequently, but the decision to buy is a composite decision of several individuals each of whom has a different interest in the purchase and a different point of view.

Producers of industrial goods, in formulating marketing plans, hitherto have given inadequate attention to the management organization of their potential customers. Many of the shortcomings marketwise of some companies selling industrial goods probably can be traced to the fact that the marketing methods of those companies have not kept pace with the developments in specialized organization for management purposes in the companies which constitute large parts of their potential markets.

While innumerable variations and gradations in management organization exist, the outstanding differentiation for industrial marketing purposes is between the simple one-man customer and the articulated organizations of large companies.

In a one-man business the proprietor or manager personally directs the production, sales, delivery, and financial activities of the business and also does the buying. If he feels the need for

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<sup>7</sup> For detailed discussion of the use of these buying motives, see the third article in the series, "Why Industrial Buyers Purchase," *Advertising & Selling*, November 2, 1927.



expert advice, he may call in a consulting engineer, a public accountant, an electrical contractor, or an architect. In selling equipment or materials to such an enterprise, there is only one man to convince, except when a consultant has been called in, but the distraction of other duties renders it difficult for a salesman to obtain an expeditious audience. The buyer in that case, furthermore, often lacks the imagination or technical training necessary to comprehend readily the merits of the articles placed before him. He is rather likely to have his mind so occupied with pressing operating problems that he does not study plans for the future. His financial resources usually are limited and for that reason, as well as because of lack of study and foresight, he delays the scrapping of obsolescent equipment. Although businesses of this type buy some equipment and materials directly from manufacturers, their logical sources of supply usually are local supply merchants or distributors.

The companies with articulated management include not only large manufacturing businesses but also steam railways, local public utilities, department stores, steamship companies, large construction companies, and so on. These companies individually place much larger orders, of course, than are placed by one-man businesses; and there are some types of equipment, such as conveyors, tabulating machines, and bookkeeping machines, which find their only market here. In these large companies, at least among those which are prosperous, there is a disposition to scrap obsolete machinery as soon as better and more economical methods can be demonstrated. A readier hearing for new ideas can be secured among these companies than among the one-man firms.

Large buyers of industrial goods desire to purchase most items directly from manufacturers, not only in the hope of buying more cheaply, but also because they expect to secure more new ideas from manufacturers' salesmen than from dealers' salesmen. Direct sale to a large company, however, is a complicated undertaking, and it is at this point that many industrial marketing plans fail.

Before discussing the buying methods of large companies further, it will be well to pause long enough to give some evidence regarding the relative size of the markets afforded by one-man businesses and by larger companies. A large business publish-



ing company made an inquiry in 1927 regarding the industrial market among manufacturing plants in 10 representative cities. In these 10 cities there were 1,421 manufacturing plants which could be classed as one-man businesses and 258 establishments operated by larger companies.

The 1,421 one-man businesses constituted 85% of the total number of manufacturing plants in these cities; but they represented only 15.7% of the connected horsepower load—an index to mechanical equipment used; and they employed only 30.9% of the persons at work in manufacturing plants in those cities. Connected horsepower load is the best general index to the relative importance of this group of businesses in the industrial market.

The 258 larger plants were further classified into two groups, one group including 60 so-called “master” plants and the other group 198 “run-of-industry” plants. The “master” plants and the “medium-size” plants together constituted only 15% of the total number of plants but they had 84.3% of the connected load and 69.1% of the employees. Two other inquiries which have come to my attention, undertaken for other purposes, furnish evidence which agrees closely with the figures just given; they indicate that 75% to 80% of the industrial market, generally, is among companies large enough to have departmental organizations.

In companies with departmental organizations, the purchasing agent handles the orders for staple materials and supplies. The procedure in purchasing other types of equipment and materials is illustrated by the following examples. One company, in buying equipment requiring technical knowledge, insists that the heads of the factory engineering department, the tool equipment department, and the metallurgical department confer with the equipment salesman. After these executives have reached a decision, their recommendation is reported to an operating vice-president for approval before the order is submitted to the purchasing department for issuance. In another company a request for new equipment must originate with a department foreman and be passed on by a research engineer as well as by other executives. In several companies the heads of the sales departments are brought into the consultations of plant executives regarding purchases of fabricating materials and parts. The purchases of a

railway company are governed by the views of technical officers and operating officials, as well as by those of the purchasing department.

There are as many different arrangements governing industrial purchases as there are types of industrial organization. The significant point, however, is not the variety of these arrangements, but the fact that in the major industrial markets the "buyer" is not an individual but a group of individuals in each plant, each individual having a specialized interest in a proposed purchase.

The purchasing agents in such plants as those just referred to place the orders. Arrangements for interviews with operating executives are made only with their approval. They secure quotations, ascertain the reliability of the sellers, arrange terms, and guard against promiscuous invasion of the plant by salesmen. Inasmuch as so many sellers still have varying price policies, one of the chief tasks of a purchasing agent is to make as nearly sure as possible that his company is securing a rock-bottom quotation. This procedure seems to throw the emphasis in selling onto price, whereas to an increasing extent the real decisions regarding purchases of industrial equipment and materials are governed by the opinions of operating and staff officials regarding the performance or quality of the article in question.

The largest market for many types of industrial goods is among companies with departmental organizations for management. The operating officials and staff executives in those companies are receptive to constructive, informational sales efforts. When an article is to be sold on performance or merit, it is essential that the sales message be delivered to these operating officials and staff executives in the language that they use.

### *The Merchandising Function in Industrial Marketing*

As conditions change in an industry, companies add new products to their lines, revamp some of the old products, and discard others. Even Mr. Ford changed his hardy perennial model. The manufacturers of electric motors, by promoting the use of electric refrigeration, have upset the market of the ice machinery manufacturers. Markets are shifting and changes in demand are occurring continually, not only for consumers' goods, but also for industrial goods. Changes in the needs and fancies of consumers, changes in manufacturing technique, new inventions, and changes

in the arts, all are working to bring about more or less frequent alterations in many types of products.

The problems of determining what to add to a line, what to discard, and what to revamp, have become more and more pressing and complex with the increase in the size of industrial units and with the diversification of industry. The function of dealing with these problems relating to the determination of what to make is merchandising. Clear-cut recognition of this function is a recent development. In fact, in my book *Principles of Merchandising*, published in 1924, I used the term "merchandising" broadly to cover all the marketing functions; it now is apparent that the term should be applied to a single set of marketing activities.

The merchandising function probably is most clearly and generally recognized in the department store business. It is now common in department stores to have merchandise managers, whose task is to supervise the selection and movement of merchandise. Among manufacturers of consumers' goods, there are several companies which include merchandise managers in their organizations. Here and there among manufacturers of industrial goods an executive comparable to a merchandise manager is employed. At least one of the rubber manufacturing companies has a merchandise manager for each of its major departments. One of the large motor truck companies has a commercial engineer, whose task is essentially that of a merchandise manager. A steel company recently has employed an executive for new development and research work of a merchandising character.

All the examples cited regarding the employment of merchandise managers by manufacturing companies are of recent occurrence. In general, it is not an exaggeration to say that the merchandising function is still inadequately provided for in the organizations of most manufacturing companies. In the history of industrial organization one of the outstanding developments has been the splitting off of one specialized function after another. Industry in general is just now beginning to recognize that merchandising is a specialized function.

If merchandising is to be recognized as a distinct function in management, the responsibility for the performance of that function should be definitely fixed. Many of the excesses in variety of products uncovered by the Division of Simplified Practice of the Department of Commerce, for example, have been



the result of inadequate control of the merchandising function in individual companies. Many of the failures of producers to sense shifts in demand also have been the result of the absence of definite provision for control of merchandising in the producers' organizations.

The determination of the make-up of a line of products and the decisions on the changes to be made in the products usually cannot be left with safety to the production manager.<sup>8</sup> The production manager ordinarily lacks the customers' point of view and is unfamiliar with the needs and buying motives of the users of the products. He is governed more by considerations of economy and facility in production than by factors affecting the salability of the products. The sales manager, on the other hand, who is directly in charge of the salesforce, also cannot safely be entrusted in most organizations with full discretion for determining the products to be made.<sup>9</sup> He usually has an inadequate grasp of the limitations imposed by factory conditions. In his desire to please customers and under pressure from his salesmen, he is continually tempted to make unwarranted increases in the assortment offered or to retain products which should be discarded. The sales manager, furthermore, has his attention focussed continually on operating problems. He seldom has time to adopt the reflective attitude which is essential for successful merchandising. It is the sales manager's job to make sure that old markets are thoroughly cultivated and that new markets are found for existing products. It should be the merchandise manager's job to find new products for old and new markets and to ascertain wherein the make-up of the line can be changed to gain either a substantial sales advantage or a material production economy.

The merchandising task obviously is very different in different types of industry. The development of the Emmet mercury boiler and turbine by the General Electric Company has been essentially a merchandising enterprise of the most highly specialized sort. The United Shoe Machinery Company maintains a staff of inventors and experimenters, whose task is to devise and develop improvements for the machinery and equipment that the company sells, a merchandising task of especial importance in that instance. The rapid growth of the automobile industry has

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<sup>8</sup> See Mallock Grinding Machine Company, p. 86.

<sup>9</sup> See Covent, Smith & Company, p. 82.



given rise to many new merchandising opportunities; for example, a whole range of new tools have come on the market for use in automobile work. In all industries in which style is a factor the producers of fabricating materials have a continuous merchandising problem of ascertaining style tendencies and adjusting production plans thereto.

The duties of an executive responsible for merchandising relate both to sales and to production. The executive in charge of merchandising should be responsible for furnishing information to the designing, inventing, or experimental department regarding products and improvements which will stimulate sales. While new inventions occasionally are the result of the inspiration of a genius, they are much more commonly the outcome of organized search for the solution of recognized problems. The merchandising executive should be looking ahead, not only to the immediate future, but also the more distant future, to ascertain the sales opportunities that are likely to occur. It is one of his tasks to crystallize the problems on which the factory engineering or experimental force are to work. The merchandising executive should secure information regarding potential product developments from the sales organization, from the factory organization, and from such independent sources as he can tap. He should be charged with responsibility, furthermore, for judging the commercial practicability of new designs and new types of products. He should decide whether slight modifications in existing products are to be made. He also should determine when old products are to be dropped. In one company, which manufactures goods that are in part of a novelty character, the merchandise manager is expected to drop an old item from the line whenever a new item is added. If such a discontinuance is not made, he has to justify every item that remains. In industries making style goods, cold-blooded judgment on the discontinuance of obsolescent patterns is essential.

Another merchandising function which should be closely associated with the determination of the types of products to be made is that of deciding the quantities of goods to be made. This problem does not arise in a business which makes goods only on order and which does not carry even a stock of parts in process. For a great many industries, however, stocks of goods in process or stocks of finished goods must be carried, and it is

essentially a merchandising task to provide the factory organization with information to guide it in controlling inventories.

Several broad questions of policy are involved in merchandising. One of those which deserves most attention is the simplification of lines.<sup>10</sup> Conditions in the pump industry in this respect are typical of those in many others. Pump catalogs show a much greater assortment of models, types, designs, and sizes, it is stated by men familiar with conditions, than the market warrants. One pump manufacturer, for example, makes one model of a complex pump in from 10 to 20 sizes and variations, yielding differences in head and capacity which are smaller than any pump buyer requires for his practical calculations. A large percentage of the present range of size and varieties could be eliminated without seriously inconveniencing buyers. There are numerous companies which attribute to competitive conditions the existence of an uneconomically large assortment in their lines, whereas the real reason lies in the lack of proper handling of the merchandising function.

In addition to eliminating unnecessary types of products from the assortment offered for sale, a company, for success in marketing, must sense shifts in demand and, if possible, prepare for them. When the market for a particular product is declining, it is vital to ascertain whether the decline is merely temporary, whether the product is to be entirely superseded, or whether its market must be more highly specialized.

In a case in which the demand for a product is falling off, with little opportunity for securing an adequate volume of business from specialized markets, a shift into a new market may be at least a partial solution of a company's problem. A company which manufactured stationary steam engines, for example, found that its sales were falling off about a dozen years ago. The company, therefore, decided to engage in the manufacture of steam shovels. An experienced steam shovel designer was employed and under him a new shovel was designed and built. This shovel proved to be highly successful in operation. Because of the merits of the product and the systematic and intensive sales and advertising programs followed out, the manufacture and sale of steam shovels came to constitute the major part of the company's business, and eventually the steam engine business was sold. In the instance just cited the company added a new product

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<sup>10</sup> See Richwell Supply Company, p. 76.

to its output in order to meet shifting market conditions. Other circumstances also occasion additions of new products. One company which originally manufactured boilers has extended the range of its products, by purchasing other companies, to include powdered coal equipment and recording instruments, in order to be able to offer more comprehensive power plant service.

When it is proposed that new products should be added to a line, the first test of the wisdom of the proposal is whether the products will meet a genuine market need and not constitute merely burdensome items in the catalog and in the factory. If it is determined that marketing opportunities exist, then the question of introducing the new items must be weighed also from the organization and production standpoints.

A company which was manufacturing surgical instruments experienced serious difficulties because of failure to recognize the sale problems that would result from diversification of its line. In order to smooth out its production peak, the company decided to manufacture grease guns for automobiles. Although much of the existing plant equipment could be used for the manufacture of the new line, the market for grease guns was entirely different from that for surgical instruments. To develop the new market, it was decided to add other automobile accessories, which necessitated the construction of a new plant. The company thus added to its production problems and had two distinct sets of marketing problems on its hands, with which the organization proved to be unable to cope. The determination of the methods by which a company safely can diversify its business is essentially a merchandising problem, which takes account of conditions both in manufacturing and in selling.

One means of diversifying a line is by adding a new grade of products to be sold at prices different from those placed on the established grades. This means of diversification may lead to difficulties. A paper manufacturing company in the Middle West, for example, had several grades of paper, one of which it had advertised extensively for commercial use. When competition became severe, the company added another grade slightly below that of the advertised brand and sold the new grade at a lower price, with the result that the company's market was more seriously upset than it had been before. Through the company's name the two brands were associated in buyers' minds and sales



of the lower grade cut into the sales of the higher grade. In other words, the company traded down. Trading down is the addition to an established line of a lower-grade product so associated in buyers' minds with the higher grade as to benefit from the reputation of that grade. Trading down necessarily tends to impair the reputation of the higher grade. In industrial marketing trading down is probably less common than it is in the marketing of consumers' goods. This difference can be explained by the fact that the buying motives for industrial goods are rational and, hence, differences in quality are more likely to be evaluated on a rational basis.<sup>11</sup> Even in industrial marketing, however, there is real danger of impairing the reputation of an established grade of products by trading down. Stability cannot be secured in that manner.

In the industrial field several companies stand out as conspicuous examples of stability and success. Among these are the General Electric Company, the Ingersoll-Rand Company, and the United Shoe Machinery Company. These companies have not gained their success primarily by imitating the products of others, or by expanding their activities in markets already saturated. On the contrary, they have devised new products to open up new markets. To follow up such a constructive policy requires imagination and initiative. If these examples were emulated by a much larger number of companies, there would be less overproduction and less price-cutting in many industries. In other words, the solution of numerous pressing business problems is to be found in better merchandising.

### *Securing Distribution of Industrial Goods*

After a manufacturer has ascertained the potential users of his products, has learned where they are located, has found out what their buying motives are, and has made sure that his products are thoroughly suited to the needs of the market, his next problem is that of securing distribution. How are orders to be obtained and how are prospective users to be supplied with the goods?

Methods of distributing industrial goods are varied, and many manufacturers are by no means certain that the methods which they now are using are the ones best suited to their needs. This

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<sup>11</sup> See Driver-Harris Company, p. 284.



uncertainty is the result of changing conditions among producers, changing conditions among users, modifications of distributors' methods, and, not least, the lack of scientific study of the problems of distribution. In the absence of scientific study, solutions are being sought by the trial and error method. At the present time industrial markets are in too great a state of flux to warrant dogmatic statements; a general discussion of the methods of securing distribution of industrial goods can lead to tentative conclusions only.

In breaking down this subject into its constituent parts, it is essential for the purpose of this chapter to omit a discussion of methods of marketing primary materials. The market for each primary material presents specialized problems peculiar to itself, such as the operation of wool pools and "buying on the back" in the wool trade, the contrast between packer hides and country hides in the hide market, and the contracting system in the sugar beet industry. Those problems are no less important than the ones to which attention is directed here, but this is not the place to take them up in detail; attention is confined, therefore, to methods of distributing manufactured goods for the industrial market.

The first differentiation to be made among methods of distributing industrial goods is between direct marketing and indirect distribution. By direct marketing is meant sale or lease to industrial users by the manufacturer's own sales organization or his sales agents. By indirect distribution is meant marketing through the medium of jobbers or merchants, who purchase for resale. The term "direct marketing" is used here to include sales by selling agents, manufacturers' agents, and brokers, as well as sales by manufacturers' salesmen, whereas "indirect distribution" implies sales to intermediary merchants or dealers who buy and sell on their own account by taking title to the goods.

Direct marketing takes place much more frequently in the industrial field than in the trade in consumers' goods. A farmer occasionally peddles his produce from house to house; a brush manufacturer and a hosiery manufacturer here and there sell directly to consumers; but the volume of such sales by producers directly to consumers constitutes only a small bit of the total volume of trade in consumers' goods. In the industrial markets, in contrast, many manufacturers of machinery and materials sell

their entire output directly to the operators of the plants in which the equipment and materials are to be used.

Some of the chief factors which govern the choice between direct marketing and indirect distribution of industrial goods are: —the number of potential users; the density of the market; the average unit of sale; the credit standing of the users; the regularity of demand; the degree of promptness in delivery required; the opportunities for economy in shipping; and the amount of technical sales service needed. When the number of potential users is small, the market concentrated, the unit of sale large, the credit standing of users high, demand regular, prompt delivery not of major importance, economies in shipment possible, and technical sales service needed, direct marketing is favored. Contrary circumstances, on the other hand, favor indirect marketing.<sup>12</sup>

In the marketing of installations direct methods predominate. Such equipment as lathes used in small machine shops and job printing presses often are handled by merchants or jobbers, for the purchases of such items by scattered users are small, infrequent, and irregular; but items of factory equipment such as knitting machines, spinning frames, looms, material-handling equipment, refrigerating equipment, and steam boilers usually are marketed directly. Construction materials, such as steel sash and valves and fittings, are sold by several manufacturers directly to contractors employed to erect large buildings. Orders for installation in factories commonly are large enough to warrant direct marketing of those items, and, in numerous instances, technical sales service is required or is at least advantageous for making sure that the equipment is suited to the needs of the purchasers.

For accessory equipment, both direct and indirect methods of distribution are used. Several manufacturers of mechanical conveyors sell directly to users and employ skilled sales engineers for analyzing the requirements of prospective users. Several large manufacturers of automobile trucks distribute through merchants in sparse markets, but sell the bulk of their output through the efforts of their own salesmen in the industrial and commercial markets.

Occasionally a manufacturer of supplies markets his products directly to users. For instance, a company making a compound

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<sup>12</sup> See Wendell Company, p. 108; et seq.

for cleaning metals in plants which manufacture metal parts and small metal objects employs trained salesmen to advise prospective customers regarding the utilization of the compound. In general, however, supplies are distributed through merchants and supply firms, which spread their selling expenses over a variety of goods, call on their customers frequently, and carry stocks from which prompt deliveries can be made.

Fabricating parts, such as automobile bodies, truck tires, and rubber heels for shoes, usually are bought in large enough quantities to permit direct sale, and, in numerous instances, prolonged negotiations take place between the fabricator and the manufacturer of parts regarding the detailed specifications of the parts and the terms of sale.

For fabricating materials and process materials it is common practice for the manufacturers to sell directly to users when purchases are made in car-lot quantities, leaving the less than car-lot business to be handled by jobbers and merchants. The steel companies, for example, take contracts for direct shipments in car-lot quantities, while much of the trade in less than car-lot quantities goes through the hands of iron and steel jobbers.

This summary indicates one of the outstanding differences between the trade in industrial goods and the trade in consumers' goods. The possibilities of direct sale and the conditions which give rise to those possibilities are foreign to the markets for most sorts of consumers' goods. This is one of the reasons why the problems of marketing industrial goods, if they are to be solved effectively, must be approached as a distinct type of marketing problems. The advertising agent, for example, who is accustomed to preparing copy for consumers' goods, is likely to make a sorry showing in industrial advertising until he learns to distinguish clearly between the characteristics of the two general types of markets.

In connection with the direct marketing of certain types of installations and accessory equipment, one of the major questions of policy is whether to sell outright or to lease.<sup>13</sup> If the equipment is leased it may be either at a flat rental rate or on a royalty basis. Examples of marketing equipment by leasing are afforded not only by the shoe machinery industry but also by the tabulating machine

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<sup>13</sup> See Kawnee Supply Company, p. 251; Otwell Bottling Machinery Company, p. 313; also Radio Instrument Company, 6 H.B.R. 522, and Carton Machinery Company, 6 H.B.R. 533.



business, the carton machinery industry, formerly by the coke oven industry, and by several others.

One of the chief reasons for leasing equipment instead of selling it outright is that thereby higher financial returns may be secured. These higher financial returns are partly the result of the rates that are charged and partly the result of facilities for sales promotion which the lease system affords. The lease system usually is utilized only for equipment protected by patents. The higher rates that are charged by some companies for leased equipment, therefore, include the monopolistic profits which they are permitted to gain as reward for their ingenuity in devising machines worthy of patent protection. Monopolistic control, however, is not the only consideration involved in deciding whether to lease or to sell machinery outright; in so many instances are patented machines sold outright that the leasing problem obviously is one of distribution policy as well as of price policy.

From the standpoint of distribution policy, one of the advantages of the leasing system is that under it less sales resistance is encountered, especially in the introduction of a new and expensive item, than is encountered under a system of outright sale. Expensive tabulating machines, for example, will be installed on leases in many offices which would not purchase the machines outright, at least not at the outset. When equipment is leased, the lessor bears the risk of obsolescence and finances the capital investment. A prospective user often will be less reluctant to try out a new sort of machine when relieved of these risks. This was the case, for example, when machinery for packing goods in cartons first was placed on the market.

For some expensive items of equipment, moreover, many of the potential users have such limited financial resources that they could not purchase outright. Use of the lease system under such circumstances widens the market. Examples of this sort have been furnished in the shoe manufacturing industry, where some of the most expensive machines are leased on a royalty basis; and in the tailor trade, where pressing machines are leased to small tailor shops. By leasing its machines, furthermore, a company can control the market for repair parts used on those machines—an advantage of no mean significance.

While the lease system enjoys the advantages that have been enumerated, it also involves special burdens for the company which



utilizes it as a method of distribution. The extra financial investment that it requires and the risk of loss from obsolescence are obvious. A company that leases machinery to users, furthermore, must set up an organization for providing inspection, repair, and upkeep service, which become costly in a scattered market. Although the lease system lessens sales resistance in placing a new type of equipment on the market, it is significant that when the dependability of the machinery has been proven, the tendency is for the lease system to be supplanted by outright sale except in cases where monopolistic control is preserved by patented improvements.

### *Dealer Relations in Industrial Marketing*

When indirect methods of distribution are used in industrial marketing, goods are sold to jobbers, distributors, or dealers for resale. The manufacturer conveys the title to the goods to merchants who perform part of the functions of marketing the goods from factories, mines, or farms to users.

The picture of dealer relations in industrial marketing is a confused one; practices are varied and continually changing, and the future abounds with uncertainties. Under the circumstances dealers in industrial goods do not readily lend themselves to classification. The term jobber, for example, when used in one sense, includes firms which perform wholesale functions in distributing goods to retail dealers for resale. Electrical supply jobbers sell small motors and wiring materials to contractor-dealers who, in turn, sell the equipment for installation in factories. At the same time the jobbers who sell to contractor-dealers often sell the same sort of goods to manufacturers for plant equipment and upkeep, thus occasionally coming into competition with their own customers. The term jobber also frequently is applied to warehouse distributors, as for example in the iron and steel industry. Dealers in chemicals now hold much the same place in the market for chemicals that jobbers do in the iron and steel business. In the paper industry, jobbers sell all kinds of papers to printers and to manufacturers requiring paper for miscellaneous purposes.

In so far as any classification of industrial merchants can be attempted, the chief lines of demarcation are between (1) merchants specializing in types of products, which they sell to a

variety of industries (horizontal markets), and (2) merchants who sell a variety of supplies, equipment, and materials to specialized industries (vertical markets). Paper jobbers are an example of the first type, and mill supply firms of the second type. In suggesting such a differentiation, however, it must be realized that many merchants handling industrial goods cannot be said to fall definitely into either category. The suggested differentiation probably is more useful as indicating an alignment that may develop in the future rather than one which is clearly recognized at the present time either by manufacturers or by the merchants themselves.

For industrial merchants, as for merchants marketing consumers' goods, the economic services which they render constitute the reason for their existence. An industrial merchant, for one thing, usually markets the products of numerous manufacturers; hence his marketing costs are spread over a variety of items, a factor of especial consequence when the unit sale is small, when customers are scattered sparsely over wide territories, or when demand is sporadic. A merchant, in the second place, carries stocks of goods from which immediate delivery can be made. When a merchant buys in large lots and sells in small lots, he effects a saving in transportation costs. Credit risks also are assumed by the merchants.

In certain trades, furthermore, special sorts of services are rendered by industrial merchants. In the civil engineering and construction business, for example, although large numbers of machines are sold to contractors, the renting of machinery also is common. The wide extent of this rental practice is the result of the noncontinuous character of construction work and the varied requirements of different jobs. Only a large contracting firm can afford to own all the types of equipment required for different purposes. Rental, moreover, is one method of meeting the used-equipment problem, for the practice of renting makes possible the more rapid introduction of new and improved types of equipment without experiencing all the demoralizing disadvantages of accepting used equipment in trade.<sup>14</sup>

An industry in which notable changes in marketing methods have occurred during the last 12 years is the chemical industry. Prior to the war a common method of marketing chemicals was by

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<sup>14</sup> See Kawnee Supply Company, p. 251.

means of brokers and dealers. After the war, when competition between chemical manufacturers became severe, several large chemical manufacturing companies decided to develop sales organizations for handling the large-volume business directly. Since then direct selling has become a general practice in marketing heavy chemicals and appears to be increasing in the markets for several other types of chemicals.<sup>15</sup>

The conditions which led to direct marketing by chemical manufacturers have many parallels in other industries. In some cases, as for example those of several belting manufacturers, experiments with direct marketing have not had satisfactory results, either because the demand was too sporadic or the unit sale too small to permit direct marketing to be carried on economically. Where manufacturers have continued to market their products through dealers, the difficulty of dealing satisfactorily with the resale price problem, the demands of dealers for protection against declines in prices, and especially the practices of dealers in shifting their patronage or of threatening to shift unless concessions are granted have caused widespread discontent and strained relations between dealers and manufacturers.

Dealer relationships in industrial marketing, like the relations between manufacturers and wholesalers in several trades handling consumers' goods, have become widely unsettled because of the conflict between dealers' practices and manufacturers' objectives. The typical industrial dealers, like the typical wholesalers, traditionally have been traders, shrewdly bargaining for price concessions and looking to favorable differentials in market prices for substantial portions of their net profits. In some trades, furthermore, as for example in the paper jobbing trade, the jobbers have sought to control patronage by featuring their own private brands. Such practices as those just cited often have threatened the stability of a manufacturer's sales or have frustrated his efforts to direct the demand for his products.

From a manufacturer's standpoint, market stability is essential for the economical operation of a large producing plant and for providing regular employment for workers. A manufacturer operating on a substantial scale wishes to be assured, if possible, of a steady volume of sales, both for the present and for the future. In an effort to attain stability of their markets, numerous

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<sup>15</sup> See Radams Chemical Company, 6 H.B.R. 134.



manufacturers have undertaken to trade-mark their products, to advertise them to users or to consumers, and to adopt other methods of sales promotion. In so far as manufacturers have been enabled by such means to stabilize the demand for their products, the scope of the trading activities of dealers and jobbers has been restricted. As more and more manufacturers have taken over merchandising and sales promotion functions previously performed by dealers and wholesalers, a new alignment of tasks has been emerging. In this new alignment the dealer in the industrial field, like the wholesaler in the consumers' goods markets, is bound to become more and more a distributor and less a trader. Meanwhile a struggle continues between the two conflicting points of view.

In this problem of dealer relations in industrial marketing, by no means all the fault lies with the dealers. On the contrary, the manufacturers are fully as much, if not more, at fault. Many manufacturers have not thought out logical and well-defined distribution policies; their price policies frequently are vicious; and they often fail to comprehend the dealers' problems and the dealers' point of view.

This failure to understand the dealer's problem is exemplified by manufacturers' complaints that distributors, such as mill supply firms, do not *push* each particular manufacturer's line. Such a complaint usually represents a shortsighted view of the distributor's activities. If each distributor were to *push* the line of each manufacturer whose goods he carries, his costs of doing business would rise to a point where they would wipe out most of the economy in selling, which constitutes one of the chief reasons for his business existence. Often the distributor, or jobber, or dealer is damned for not performing sales promotion services which the manufacturer properly should carry on with his own organization.

Although many manufacturers of industrial goods are distributing their products promiscuously, through whatever channels offer immediate sales, with little regard for future prospects, two distinct types of distribution are in process of development. One type is intensive distribution; the other type is selected distribution.<sup>16</sup>

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<sup>16</sup> See Duran Machinery Company, p. 170; also Strength Union Company, Raeburn Electric Company, Nobel Chain Company, Wiremold Company, 6 H.B.R. 166 et seq.



When a manufacturer adopts a program of intensive distribution, he seeks to have his goods carried by all dealers in each community who are potential purveyors of such merchandise. A manufacturer of shop supplies, such as brooms and pails, normally seeks intensive distribution. Likewise manufacturers of sandpaper, emery cloth, packings, bolts and nuts, and numerous types of supplies seek intensive distribution. The goods for which intensive distribution is needed are particularly those for which users are likely to accept substitution of one brand for another rather than to go to the inconvenience of seeking out a dealer who carries a particular brand or of postponing purchase till the preferred brand can be secured. A manufacturer whose goods call for intensive distribution loses potential sales under any other method. The industrial goods for which intensive distribution is desirable are analogous to convenience goods sold to consumers.

An example of selected distribution is afforded by a company manufacturing machine tools and equipment, which markets its product through one distributor in each market center. The essence of selected distribution is the selection of one or a few merchants in each market to whom sales are confined.

Selected distribution is especially desirable in instances in which each dealer is expected to carry a full line of goods in a range of sizes or variety of grades. In such cases a dealer cannot carry complete lines of several competing manufacturers without assuming an excessive inventory burden. Leather belting is an example of a line in which dealers' inventory requirements call for selected distribution. When dealer cooperation in sales promotion work is required, a program of selected distribution must be adopted, for no dealer can be expected to incur expense for missionary work from which competitors may gain the chief benefits.

The problems of dealer relationships which are troublesome to so many manufacturers can be solved in numerous instances, not by propaganda among the dealers, but by a better comprehension of his market by each manufacturer and a careful planning of distribution methods for the cultivation of that market.

### *Organizing for Industrial Marketing*

The machinery by which a company actually secures orders is its sales organization. In industrial marketing, the private sales organizations of companies range in type all the way from a

salesforce consisting of one man, who sometimes is also president or treasurer of the company, to a large crew of salesmen organized under district managers and governed by an elaborate set of instructions. By some companies, brokers, selling agents, or manufacturers' agents are substituted for such private sales organizations. These differences in sales organization reflect in some instances differences in operating conditions; in other instances, however, they represent diversities in the degrees of alertness with which various companies are handling their marketing problems.

Brokers have their largest field of activity in marketing primary materials, such as wheat and cotton. A broker is a go-between, affiliated with neither buyer nor seller. When a manufacturer secures his orders through the medium of brokers, he does not have continuous relationships with particular customers nor can he benefit materially by attempting to individualize his service or his product. Selling through brokers is a cheap method of marketing, suited to standardized goods which are sold entirely on a price basis.

Selling agents are employed in lieu of private sales organizations by copper mining companies, textile manufacturers, occasionally by machinery manufacturers, and by at least one chemical manufacturing company. The selling agent in each instance regularly undertakes to sell the entire output of each company for which it is agent. Except in the case of the agents selling copper, a selling agent employs a salesforce. Inasmuch as a selling agent usually sells the products of several manufacturers, economy in sales management expense presumably is secured.

A firm of selling agents must seek to serve its clients well, for on the satisfactoriness of its service its success depends. Nevertheless, a manufacturer often finds it more difficult to coordinate sales activities with factory operations when a separate firm handles the selling. Under conditions which offer opportunities for market development, a firm of selling agents, furthermore, is likely to be tempted to suggest price concessions instead of an intensification of sales efforts as a means of increasing the volume of sales; for the burden of increased sales effort is borne by the selling agent,—that of price concessions by the manufacturer.

The third substitute for a manufacturer's private sales organization is provided in the form of manufacturers' agents. A

company which employs manufacturers' agents exercises a greater degree of control over its sales activities than is exercised by a company which entrusts the sale of its products to a sole selling agent. When manufacturers' agents are employed, each is assigned a particular territory in which to operate and sells only in that territory. In selecting the agents and in observing their activities, the manufacturer must perform a sales management task, but that task is lighter than it would be if salesmen instead of agents were employed.

The chief advantage accruing from the employment of manufacturers' agents is the saving in selling expense. An agent usually solicits orders for several noncompeting manufacturers and therefore spreads the selling expense. A manufacturers' agent, furthermore, like a broker or a selling agent, is paid only a commission on sales; hence field sales expense is incurred by the company only for orders actually obtained. In several industries acquaintance with purchasing agents, foremen, superintendents, and plant engineers is an asset of manufacturers' agents which warrants their employment by a company just entering the market. While many companies properly are using the services of manufacturers' agents in marketing their products, other companies continue to employ agents through inertia or because of lack of alertness in comprehending their marketing problems. Numerous manufacturers who employ their own salesmen in dense markets, moreover, utilize the services of manufacturers' agents in sparse markets.<sup>17</sup>

In industrial marketing, as in the marketing of consumers' goods, when a company decides to maintain a private salesforce the first essential is to ascertain the sales tasks to be performed. When the tasks to be performed are known, the organization for performing them can be planned intelligently. A salesman's tasks usually involve one or several of the following duties: locating prospective customers; booking orders; maintaining continuous relationships with customers from whom repeat orders may be forthcoming; aiding dealers in promoting sales, when distribution is through dealers; furnishing requisite information to operating officials and plant engineers regarding the product, when direct marketing methods are employed; stimulating latent demand among both new and old customers by arousing effective buying

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<sup>17</sup> See Tarleton Machinery Company, p. 122.



motives; and adjusting complaints from customers or users. The sales management task comprises the selection and instruction of the salesmen; the assignment of territories or of prospective customers; the determination of the frequency of call; the continuous supervision and direction of the work of the salesmen; and the determination of the basis for paying them for their services.

The fact, obvious when mentioned, that there are not enough "100 per cent" salesmen available to enable every manufacturing company and every distributing firm to employ none but top-notch salesmen is of especial significance in industrial marketing. As has been pointed out, a large part of the purchases of many sorts of industrial goods are made by companies with departmental organizations. For dealing with operating executives and plant engineers a salesman needs to understand thoroughly and to be able to demonstrate the technical characteristics and qualities of the article which he is selling; he also should be able to size up the possible application of the article to a particular user's needs; and he must have skill in handling sales negotiations. Since a company's salesforce usually is made up largely of men with no more than average ability, two provisions must be made in order to attain satisfactory sales results. In the first place, the salesmen must be given thorough training on the technical points encountered in selling the product and definite guidance in locating prospective customers and in handling negotiations.<sup>18</sup> In the second place, advertising of the right sort usually is needed for supplementing the efforts of the salesmen, particularly by furnishing stimulating information to operating officials and plant engineers.

One of the sales organization problems which arises when a company is producing a diverse line of products is that of segregating the sales organization so that different products are sold, or different classes of customers are served, by separate salesforces.<sup>19</sup>

Provided that purchases of each of several groups of customers are large enough in the aggregate to warrant specialized selling, the ground on which the question of segregating the salesforce is to be determined is the degree of dissimilarity in the buying habits and practices of the various groups of customers, and the

<sup>18</sup> See Elliott-Fisher Company, p. 244.

<sup>19</sup> See Luesic Chemical Company, p. 219; et seq.



extent to which specialized technical knowledge on the part of the salesmen is required for carrying on negotiations with operating and staff executives in the customers' organizations. The fact that salesmen usually are of only average ability is also a factor inducing segregation of the salesforce under such circumstances as have just been cited.

*Missionary Work and Technical Sales  
Service in Industrial Markets*

In industrial marketing, missionary sales work comprises such activities as training dealers' salesmen by demonstration of sales methods, securing introductory orders from users who are expected to reorder from dealers, assisting dealers in securing orders from large plants, and acquainting architects and consulting engineers with the merits of particular products. The use of missionary salesmen on an extensive scale is a comparatively recent development in industrial marketing, as well as in the marketing of consumers' goods. One of the most common reasons for the adoption of the practice in industrial marketing has been a belief on the part of manufacturers seeking more effective distribution through dealers that the dealers and the dealers' salesmen were neglecting particular products or that the dealers' salesmen did not possess adequate technical knowledge to promote sales properly. The use of missionary salesmen has been one of the means by which manufacturers of industrial goods who use dealer distribution have sought to impart their sales messages to operating officials and staff executives in companies large enough to have articulated management organizations.<sup>20</sup>

The circumstances which have occasioned the adoption of missionary sales methods by various companies are illustrated specifically by the experience of a company manufacturing oils and other lubricants. For a long period this company had not had a well-defined distribution policy: it had drifted. The company produced a wide variety of lubricants, many of which served highly specialized markets, such as paper mills, foundries, steel plants, metal mines, and textile plants. When users sought to buy directly from the company, their orders were accepted. In

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<sup>20</sup> See United States Gutta Percha Paint Company, p. 61; Nancock Varnish Company, p. 266; also Maxman-Timball Company, 6 H.B.R. 301; Strength Union Company, 6 H.B.R. 297; Tansey Supplies Company, 6 H.B.R. 290.

several markets, however, sales were made chiefly to mill supply firms. When the company began, some years ago, to formulate aggressive sales plans it concluded that it could advantageously secure a much larger volume of distribution through mill supply firms and other dealers of that type than had been attained theretofore. After the dealers had placed the company's lubricants in stock, however, sales did not expand as rapidly as had been anticipated. The company then concluded that the snag which its plans had struck was the lack on the part of the dealers' salesmen of technical knowledge regarding its products. The company consequently inaugurated a program of employing missionary salesmen to travel with the dealers' salesmen to show them, by actual demonstration in the field, how users should be instructed regarding the company's lubricants and how to stimulate sales. This company's experience is one which has been particularly common in industrial marketing.

Such missionary work as that just cited is expensive and subject to pitfalls. A dealer's salesman has many items to sell; hence a manufacturer's salesman travelling with a dealer's salesman can utilize only a fraction of his time in demonstration and instruction regarding the best methods of selling the company's product. With a continual turnover of dealer's salesmen, moreover, such an educational campaign is almost endless. If all manufacturers whose goods a dealer carries were to attempt to carry out such a program, the dealer's salesmen would be constantly burdened with travelling companions. When such a program has been carried out by a manufacturer, furthermore, there commonly has been a tendency for the dealers to rely more and more on the missionary salesmen to secure orders.

The answer to the problem which so many companies have attempted to solve by employing missionary salesmen to assist dealers' salesmen probably is twofold: first, group conferences between the manufacturer and each dealer's salesmen when the dealer takes on a line requiring technical knowledge or a knack of demonstration; second, effective advertising to users to lighten the task of dealers' salesmen. When these methods do not suffice and a company finds it necessary to duplicate the sales efforts of dealers' salesmen and to carry on negotiations with operating executives, it should face the problem of whether its products do not require direct marketing instead of distribution through dealers.

Numerous manufacturers employ missionary salesmen to expound the merits of their products to architects and consulting engineers, who do not purchase materials or equipment on their own account but who do influence many purchases. The recommendations of these consultants carry weight with buyers on large construction undertakings and govern the construction and equipment purchases of many medium and small scale manufacturers. How to convey the proper sales message to these consultants is still an unsolved problem for many a manufacturer. The influential architects and consulting engineers are busy men, who sometimes are not disposed to grant much time to missionary salesmen. From a manufacturer's standpoint, furthermore, the fact that the architects and consulting engineers do not place orders makes the problem of controlling the activities of the missionary salesmen exceptionally difficult. These are circumstances which seem to call for the use of advertising to an increasing extent. A company which manufactures a special type of shingles, for example, was able to place its business on a firm footing by advertising in a journal circulating among architects after having failed to secure satisfactory results with missionary salesmen. As advertising methods are improved, more and more of the work done by missionary salesmen in numerous industries probably will be taken over by advertising.

The future of missionary selling of the types just discussed appears to be problematical. Undoubtedly there are circumstances which properly give it a place, at least temporarily, in the sales programs of various manufacturers; but plans which rely upon that method of stimulating sales should be adopted with caution and the opportunities for using advertising for missionary work should be examined with especial care.

Technical sales service, in contrast to missionary selling, aims to aid potential users of a company's products in determining the designs and specifications of equipment or materials best suited to the users' individual needs. Technical sales service deals with the individualized buying problems of particular users. It usually is rendered only upon request and does not duplicate the sales efforts of distributors. The results attained by technical sales service usually can be checked up with a fair degree of accuracy, since in many instances it is possible for the companies giving the service to ascertain either directly or indirectly whether



or not their products are purchased by each recipient of such service.

Technical sales service is rendered most extensively in the marketing of expensive installations, particularly those made to order, and fabricating parts of specialized character. Technical sales service also is offered by manufacturers of some types of accessory equipment and occasionally by manufacturers of operating supplies, fabricating materials, and process materials. For rendering such service a manufacturer employs a staff of engineers, designers, or other specially trained experts whose task is not primarily to write orders but rather upon invitation to study special problems of potential customers and to prepare recommendations as to the type of equipment or material to be purchased for solving those problems; in the case of fabricating materials and process materials the recommendations may include advice as to methods of utilization, as, for instance, in the machining of an alloy material. This service is rendered without charge to a prospective customer.

When his requirements are individualized and highly technical, there is an advantage to a buyer in having the advice of specialists on the problems involved. From the selling company's standpoint, it is important that the goods sold yield satisfactory results, since such satisfaction will enhance the company's reputation among other potential customers. So long as individualized problems of this sort continue to arise, so long will technical sales service be needed for dealing with them. When a company puts a new type of equipment or material on the market, furthermore, it may find that it can lessen sales resistance for the new product by offering technical sales service.

Technical sales service offered by a company which distributes its products through jobbers or dealers usually has something of a missionary character, since one of its chief aims is to foster distribution. Tyler, in his *Chemical Engineering Economics*, (p. 192) states: "The producers of 'accelerators' for the vulcanization of rubber rely largely on their technical field service to develop sales and create sustained demand for the product. Other examples of technical service are found in the marketing of lubricating oils and greases, technical paints, dyestuffs, tanning materials, explosives, synthetic plastics, organic solvents, industrial gases and acid-resisting alloys."

The two chief obstacles that may be encountered in offering technical sales service are the possible antagonism of consulting engineers and the cost of the service. The grounds on which consulting engineers may take offense are obvious. When a company desires to retain the goodwill of consulting engineers, therefore, it must be hesitant about offering free engineering service by its own staff. The cost of rendering technical service is high, provided it is well done—and unless it is well done it is a boomerang. The preparation of engineering plans as part of the sales service for a large power installation, for example, sometimes costs many thousand dollars; and on less elaborate projects the cost of free service often is proportionately high.<sup>21</sup> Failure to restrict their service properly or to obtain fair compensation for such service through extra charges has caused embarrassment to several manufacturers.

The success of several companies in offering technical sales service proves the worth of that method of sales promotion under special circumstances. It is one means of furnishing operating officials and staff executives of companies that are prospective customers with the technical information that they need regarding a company's products.

### *Industrial Advertising Objectives*

One of the common objectives in industrial advertising is to secure leads for the salesmen to follow up. In opening a new market or in developing a market in which it is difficult to ascertain when potential customers are receptive, advertising usually can canvass the field expeditiously and economically. The advertising thus economizes the time of the salesmen, by assuring them of an audience when they seek an interview and also by conveying an initial sales-message. Another major purpose of most industrial advertising, whether or not it aims at stimulating inquiries for salesmen or agents to follow up, is to acquaint operating executives and plant engineers with the characteristics and performance of the particular articles to be sold.

Performance advertising has been used most extensively for installations and accessory equipment, but users of materials and supplies are utilizing advertising more and more widely to acquaint operating executives with the applicability of their products to particular uses. Monel Metal, Chrome steel, Armco iron, Lumnite cement, and Oakite cleaning compound are examples of

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<sup>21</sup> See Otway Machinery Company, 6 H.B.R. 311.

materials and supplies for which performance advertising is being done.

Advertisements which furnish technical information of interest to operating officials, who are the real buyers of industrial products, not only prepare the way for salesmen but also help to offset the disadvantages which accrue from the necessity, pointed out in a previous article, of employing men of only average ability as salesmen. When a product is of the type that requires distribution through dealers, performance advertising addressed to users is particularly valuable as a means of offsetting lack of concentrated effort and deficiencies in technical knowledge among dealers and their salesmen. For example, a company which manufactures equipment for use by contractors in demolishing old structures and pavements found that it could foster distribution through supply firms by advertising its product to contractors in a manner which stimulated a real interest on their part. The advertisements to the contractors stated just what the equipment accomplished under specified conditions.

The use of advertising, properly prepared, also is a logical method of conveying sales messages to consulting engineers and architects. Not only is the advertising less costly than the employment of missionary salesmen, but the presentation of the facts is fully controlled; the time of the engineers and the architects is conserved; and they are likely to be in a more receptive mood when reading a professional or trade journal than when interrupted in the conduct of their office tasks.

One of the chief objectives in industrial advertising, therefore, is to acquaint operating officials and others who influence purchasing with the suitability of an article for particular purposes—with its performance under specific conditions. Another objective, following from this, is to acquaint those officials in the purchasers' organizations who are in charge of the use of the article with right methods of using it, so that they will obtain maximum results. Several equipment manufacturers, for instance, have used advertising space in trade publications to educate department heads and their subordinates in the operation and maintenance of the equipment. In other words, advertising has been used not only to sell equipment but to keep it sold. There probably is a vast field for future development in such use of advertising in numerous industries.



Other objectives in industrial advertising include familiarizing potential customers with the variety of a company's products available for selection; indicating the type of delivery service rendered; establishing a reputation for integrity; promoting sales of dealers and users; and discovering new uses for a product.

The objectives of an industrial advertising program govern largely the selection of the mediums to be used, the buying motives and patronage motives to which appeal is to be made, and the amount to be appropriated for the advertising budget. Determination of objectives is the initial step in planning an industrial advertising program.

### *Trade-Mark Usage in Industrial Marketing*

A trade-mark is a sign, word, or phrase which connotes the commercial responsibility for an article. The owner of a genuine trade-mark enjoys the sole right to its use on goods of the general type which he is selling. In industrial marketing trade-marks are applied generally to installation and accessory equipment, to some types of supplies, fabricating parts, fabricating materials, and process materials, and occasionally to primary materials.

The purpose of a trade-mark is to enable purchasers to identify the merchandise of the producer or merchant using the mark, so that the goodwill which he may succeed in attaching to his business will not miscarry. If an article is to be advertised, it should be trade-marked. Without this identification, the seller cannot be sure of securing the full benefits of his advertising.

A trade-mark is of value, however, only to the extent that it is recognized by buyers as a sign of the qualities or degree of excellence which they wish to obtain in the goods that they purchase. The significance attaching to a trade-mark varies for different sorts of products. For a standard article, such as sulphuric acid, a trade-mark stands merely for the dependability of a particular manufacturer in maintaining uniformity of quality in his product. In the case of an alloy steel, on the other hand, the trade-mark signifies not only uniformity in quality but also certain special characteristics possessed by the steel to which the mark is attached. Under all circumstances, however, it is the significance which a trade-mark has for buyers that makes it of value to the seller.

In order for a trade-mark to be recognized by buyers, without confusion with other marks, it obviously must be distinctive. For alert marketing, however, distinctiveness is not the only requirement in a trade-mark. A Greek cross or a star and crescent, for example, would be a distinctive trade-mark for steel and would enable buyers to detect substitution by jobbers or failure of a purchasing agent to comply with instructions. Such a mark, however, would not wholly prevent substitution, nor would it aid in lessening the frequency of errors in giving orders and in issuing buying instructions. A better type of trade-mark is one which is not merely defensive but which, by virtue of being phrasable, also is of positive assistance in marketing.<sup>22</sup>

A phrasable trade-mark is one which includes a word, name, or phrase, distinctive in its application to the line of merchandise for which it is used and easily pronounceable. Examples of phrasable trade-marks used in industrial marketing are: *Pyrex* for glassware; *Jalcase* for steel; *Stratford* for oakum; *Mazda* for lamps; *Tycos* for indicating and recording instruments; *Oakite* for cleaning materials; *Fenestra* for steel window sash; and *Exide* for storage batteries. Such marks can be used by buyers in placing orders and by operating men in issuing requisitions to purchasing agents, whereas a trade-mark of pictorial or emblematic design does not lend positive assistance in the placing of orders. If the trade-mark is phrasable, moreover, it can be utilized to better advantage in advertising than if it is merely a pictorial or emblematic design.

Trade-marks are becoming constantly of greater importance in industrial marketing, despite occasional examples of a counter tendency in individual industries. The pig iron industry affords an interesting example. For many years pig iron was bought by foundrymen by brand. Then, with increased knowledge of metallurgy and chemistry, many foundrymen changed their practice and bought pig iron on chemical specifications and price. As Mr. E. J. Lowry pointed out, however, in his address before the iron and steel section of the National Association of Purchasing Agents at its meeting in 1927 (see *Daily Metal Trade*, June 14, 1927), the purchase of pig iron by chemical analysis does not assure satisfactory results, for there are some significant qualities which are not yet revealed by these analyses. Mr. Lowry

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<sup>22</sup> See Sheridan Chemicals Company, 6 H.B.R. 349.

attributes the existence of unsatisfactory conditions in the gray iron industry partially to the attempts of the foundrymen to cut corners and prices in the purchase of pig iron by analysis. To an outsider unfamiliar with the technicalities of metallurgy, these statements suggest that the pig iron producers have an opportunity here for skillful merchandising in producing pig iron especially fitted for particular purposes, in restoring to their brands much of their former significance, and in using sales and advertising methods similar to those employed by some of the steel companies, for example, in marketing their products intensively.

This suggestion regarding the marketing of pig iron brings to the forefront one of the chief functions of a trade-mark. That function is to render assurance to buyers regarding qualities that cannot be judged adequately at the time of purchase. The reputation of an article depends, after all, on the way it "stands up" or on how certain the user can be that under like conditions it will always give the same result. A trade-mark is in effect a manufacturer's seal of good faith on the goods which he sells. For the trade-mark to become really valuable, the goods to which it is applied must be dependably uniform in quality. Dependability in quality is a sufficiently influential buying motive among users of industrial goods to warrant careful attention by manufacturers to their trade-mark policies. Selling by brand signifies confidence of the buyers in the seller's product; it builds goodwill and makes for stability in business relationships.<sup>23</sup>

The use of blanket trade-marks and of individual product brands, the problems of jobbers' and dealers' private brands, and the possibilities of employing trade-marks more extensively in marketing primary materials are examples of other questions relating to trade-mark usage which arise in industrial marketing. The analyses of those problems, however, follow directly along the lines of the analyses of trade-mark and distribution problems which have been cited.

### *Selling Ideas versus Selling Prices in the Industrial Market*

For a business enterprise to be successful it must be profitable. Unless a profit is earned, over and above all costs and expenses,

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<sup>23</sup> See Fabeck Production & Supply Company, p. 278; Driver-Harris Company, p. 284; also Beech-Nut Packing Company v. P. Lorillard Company, 3 H.B.R. 328, and Ostend Pork Products Company, 5 H.B.R. 533.



except during occasional temporary periods of readjustment, the enterprise is not successful and its continued existence is not economically warranted. This premise is the most elementary in business management, readily acknowledged by all business executives in principle, but by no means universally observed as a guide in practice.

A failure on the part of his company to earn profits frequently is ascribed by a business man to the tactics of competitors or to other external factors. The issue cannot be dodged, however, or the responsibility shifted by damning competitors or offering other alibis. Success decrees that profits must be earned despite such handicaps, and usually a company must seek its profits through control of its own individual activities.

Failure to earn profits in a particular case may be caused, of course, by excessive production costs or poor production methods. The problem in that case is one to be dealt with by the production officials, and it is not our province here to enter upon a discussion of ways and means of improving factory organization and operation.

Even when production costs are reasonably low and factory operations reasonably satisfactory, a lack of profits still may result from the use of improper distribution methods, poor sales organization, lethargic merchandising, lack of effective sales promotion, or unsound cost accounting methods.

When a company's profits are unsatisfactory, the first task is to diagnose the cause or causes. A typical example is afforded by a company which manufactured gears, ranging in size from small gears used in timing devices and numerous other small articles to large gears used in textile machinery and heavy factory equipment.<sup>24</sup> The company manufactured standard gears and also special-order gears. It sold its products to fabricators and also to users. In determining its prices the company added to the cost of raw material a predetermined figure per man-hour of direct labor to cover all direct and indirect costs and profit. The company had three salesmen whose territories were not specifically defined. For securing orders from markets which its salesmen did not visit, it relied upon its advertising and its catalog. In its advertising an illustration and brief description of a particular type of gear usually were given, with a reference to the catalog, which contained a full description of the company's

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<sup>24</sup> See *Exton Gear Company*, 6 H.B.R. 56.

products. Although the company had considered selling its products to distributors, that plan had not been adopted because the company had deemed the discount demanded by distributors to be excessive. The company desired to increase its sales in order to render its business more profitable.

The experience of other companies which have faced similar conditions indicates that this gear company could not proceed intelligently with the development of a marketing program until it had carefully diagnosed its operations. A question certainly can be raised as to whether its cost system adequately showed the relative profitableness of large gears and small gears, and of standard work and of special-order work. An analysis of the company's sales should have been made to show:—the relative volume on gears of different sizes and indications of the trend of demand; the relative sales of standard and special-order gears for plant equipment and for fabricating purposes; the relative size of typical orders for gears of the various sorts in standard types and on special orders. The trend of demand in the various types of markets should have been ascertained, and the points of interest to gear buyers determined with a view to improving the advertising methods used. The company should have decided whether the most promising future lay in the marketing of standard gears or special-order gears; in selling gears for fabricating purposes or for factory equipment; in distributing directly to users or through supply firms. A diagnosis covering such points as these, and of course other points as well, probably would have pointed the way to more profitable operation of this business; at least that has been the experience of other companies facing similar conditions.

In a highly competitive market profits seldom can be increased by cutting prices. When prices are cut by one company for the purpose of increasing its volume of sales and thereby reducing its unit costs, the success of the scheme usually is thwarted by the action of competitors in meeting the cut in prices, with the result that each company obtains about the same volume of sales that it would have secured at the higher prices, and profits are reduced all around.

A lowering of the quality of a product in order to be able to quote lower prices likewise usually is a boomerang.<sup>25</sup> Such lowering of quality injures the reputation of a company and renders it more difficult to put the business on a profitable basis. In fact, by

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<sup>25</sup> See Frenssen Company, p. 46.

yielding to the temptation to shade quality as a means of offering lower prices, a company is in effect acknowledging incompetency in merchandising and salesmanship. Buyers are vitally interested in prices, of course, but they are even more keenly interested in the merits and performance of the materials and equipment which are offered to them for purchase. Whether a buyer's attention is focussed solely on price, moreover, depends ordinarily upon the seller, upon his tactics and point of view, upon whether he is attempting to sell ideas or to sell prices.

Many of the notable successes in industrial marketing have been achieved by companies which sold ideas rather than prices. The companies manufacturing electric motors for industrial purposes, for instance, made rapid progress in marketing their products because they talked about the merits of that method of power transmission. They were selling the idea of electric power transmission, not the low prices of particular makes of motors. The leather belt manufacturers, in contrast, are said to have lost markets which they might have retained if they had talked about the merits of belt power transmission for specific purposes instead of about belts and belt prices.<sup>26</sup> Certain manufacturers of oils and greases have accomplished outstanding results by emphasizing lubrication rather than the price of grease.

In the railway field the locomotive manufacturers have shown especial enterprise in recent years by developing larger, more powerful, and more efficient locomotives, which haul longer and heavier trains at higher speed and lower cost. The locomotive manufacturers have been selling the ideas of super-power and efficient operation rather than just steam engines.

This contrast between selling ideas and selling prices epitomizes alert marketing. For a company to be able to sell ideas, its merchandise must possess merits desired by users; the buying motives and buying habits of purchasers must be comprehended; the salesforce must be organized and trained for constructive selling; and the advertising must be planned with that objective in view. The operating executives and plant engineers, whose voices govern so many industrial purchases, are especially interested in operating ideas. They have a much heartier welcome for salesmen with constructive suggestions than for salesmen who have little more than price quotations to offer.

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<sup>26</sup> See Erven Leather Products Company, 6 H.B.R. 3.



This summary leads to the final topic—the question of a one-price policy. By a one-price policy is meant the practice whereby a company quotes the same price at any one time to all customers on a given quantity and quality of merchandise. A one-price policy is the exception rather than the rule among manufacturers of both industrial goods and consumers' goods. The usual practice is to permit salesmen to trade on prices. The methods of varying prices are numerous and devious. They range from outright dickering over net prices to the granting of varied discounts and allowances on used equipment accepted in trade. This practice of varying prices leads to many abuses, such as price cutting by dealers and impairment of confidence in the seller. If salesmen are permitted to trade on prices, furthermore, they are not likely to sell ideas effectively.

When the adoption of a one-price policy is broached to a manufacturer who varies prices, or the discontinuance of excessive allowances on used machines suggested to a manufacturer who complains of the evils of that practice, the answer usually given is that competition renders the adoption of a one-price policy impractical. This sort of reply indicates one or both of two things—lack of intestinal fortitude or dearth of constructive ideas for selling. There are enough examples of companies which have been successful in adopting a one-price policy in the face of competition to prove that it can be done by any company which has an alert marketing program and the stamina to carry it out.

A one-price policy enables a company to throw its sales emphasis onto constructive ideas instead of onto prices. From a broader standpoint, a one-price policy is ethical and a varying price policy unethical. A varying price policy abuses the good faith of customers who pay the higher prices. To say that higher prices are the penalty which some purchasers pay for being poor bargainners is not a valid defense, nor is the prevalence of the practice an adequate justification for its continuance by any company. It may be common practice for Moroccan traders to cheat their customers whenever they can, but the frequency of that practice does not render it honest. During recent years manufacturers have more and more generally assumed responsibility for giving their customers dependable information regarding the quality of the merchandise offered for sale. It is equally important that customers be assured of equitable treatment on prices.

M. T. C.

## FRENSSEN COMPANY<sup>1</sup>

### MANUFACTURER—FIRE EXTINGUISHERS

MERCHANDISING—*High Quality of Product Maintained in Face of Price Competition.* A company manufacturing fire extinguishers of high quality was faced with price competition from competitors who neglected the efficiency and safety factors in their products, meeting only the minimum requirement of the National Board of Fire Underwriters. Since many buyers purchased the equipment in order to secure lower insurance rates rather than to obtain adequate fire protection, it was proposed that the company lower the quality of its fire extinguishers. The company decided, however, to maintain its maximum standard, which had an established reputation in an important portion of the market, and to strive for further recognition of the high quality of its products.

(1928)

In 1928 the Frenssen Company had been manufacturing fire extinguishers for more than 30 years. Its products always had been of high quality. However, in view of the severe price competition which had developed and the consequent narrow gross margin on which the company operated, it was proposed that the company should lower the quality of its extinguishers.

Annual sales of the Frenssen Company were approximately \$500,000. The company made the larger part of its sales to distributors. These were hardware wholesalers and retailers, supply firms, and firms specializing in the sale of fire protection equipment. In sparsely settled areas the company was represented by distributors with exclusive territories. In other areas the company did not grant exclusive sales territories. However, it customarily protected its desirable representatives by not selling to other firms in their vicinities. In numerous instances, usually when large amounts were involved, the company sold directly to users. Railroads and large industrial firms, for example, commonly were unwilling to buy through dealers. Moreover, price competition was so severe that in many cases it was necessary, if the orders were to be secured, to allow users as low prices as were given distributors. The company preferred

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<sup>1</sup> Fictitious name.

to deal through distributors whenever possible, except in the case of very large orders.

The Frenssen Company employed a few salesmen to visit distributors and also building contractors and large users in certain territories. After being used, and also after standing for long periods, the fire extinguishers needed to be recharged. In the territory of its general offices the company employed a man to recharge and service its extinguishers. In other territories this was done by the distributors. Most sales of repair parts also were made through the distributors. Distributors for Frenssen extinguishers did not sell competing brands. Usually the distributors carried about a dozen extinguishers in stock.

The sales manager of the Frenssen Company stated that experience had shown him that in a large proportion of instances fire extinguishers were installed in buildings not primarily for fire protection but as a means of securing lower insurance rates. Fire insurance companies allowed lower rates on buildings in which approved fire extinguishers were installed than they did on buildings not so equipped. Approved extinguishers were those endorsed by the National Board of Fire Underwriters after tests made by the Underwriters' Laboratories, Inc., under the standard specifications of the National Fire Protection Association. All approved extinguishers bore labels stating that they had been inspected by the Underwriters' Laboratories. Insurance rates on buildings equipped with one make of approved extinguishers were the same as those on buildings equipped with another approved make. This meant that persons buying fire extinguishers merely to lower their insurance costs tended to make their selections among the various approved brands on the basis of price. Moreover, purchasers were inclined to regard all extinguishers bearing the label of the Underwriters' Laboratories as being of equal merit.

There were in the United States in 1928, according to the sales manager of the Frenssen Company, about 30 manufacturers of fire extinguishers, most of whom had their products approved by the Underwriters' Laboratories. The sales manager stated that, with a few exceptions, those manufacturers built their fire extinguishers to meet merely the minimum requirements of the Underwriters' Laboratories, with the result that the efficiency and safety factors were reduced to the lowest possible point under



which it was possible to obtain the Underwriters' label. The chemicals with which fire extinguishers were filled made them liable to explosion if poorly constructed or improperly used.

Frenssen extinguishers far exceeded the minimum requirements. They also had special patented features that made them superior to other extinguishers on the market. Wherever fire extinguishers of high quality were demanded, as in the case of fire departments, for example, the Frenssen Company was under no marketing handicap. In a large number of instances, however, purchasers were not interested in quality so long as the products bore the label of the Underwriters' Laboratories. All fire extinguishers of similar types looked more or less alike, and purchasers were inclined to put little credence in a manufacturer's statements as to the superiorities of his products. The company at one time had contemplated undertaking a national advertising campaign to educate the public to the importance of the factor of quality in extinguishers. The estimate of cost made by an advertising agency which the company engaged to advise it as to this undertaking was so large as to show the undertaking clearly to be impracticable. In 1928 the company was advertising in a few trade papers and to a limited extent directly by mail.

The company's predicament was made more serious by reason of the excess producing capacity which existed in the industry. The sales manager estimated that the three largest manufacturers of fire extinguishers themselves could supply the entire market to which approximately 30 manufacturers were catering. The result of this excessive production capacity was severe price competition and price cutting. The Frenssen Company frequently was forced to meet the prices of manufacturers of inferior grades of extinguishers in order to make sales. The result was a narrow gross margin that made extensive advertising or other promotional work impossible.

The Frenssen Company could, by reducing the quality of its products, make substantial savings in its production costs and still meet the requirements of the Underwriters' Laboratories. On one type of extinguisher selling for about \$13, for instance, it was estimated that production costs could be reduced by \$2 without disqualifying the product for the approval of the Underwriters' Laboratories. This reduction in cost would result chiefly from use of less metal and less soldering. Any lowering of quality, how-

ever, would result in making the extinguishers less strong or less dependable.

The Frenssen Company decided not to lower the quality of its product. There was a market, though not so large a one as the company desired, for fire extinguishers of high quality selling at a fair price. And the company hoped gradually to extend this market. Moreover, if the company reduced the quality of its products, they would be even more subject to price competition than they then were. Also, there was the further factor of the possibility of accidents resulting under adverse conditions of use if the quality was lowered.

COMMENTARY: The difficulties experienced by the Frenssen Company in this case arose chiefly from two sources: (1) the existence of excess producing capacity in the industry, and (2) the influence of the labels of the Underwriters' Laboratories on brand discrimination.

The first of these obstacles to prosperity would not have been surmounted if the company had reduced the quality of its product and lowered its prices. The company would have had no assurance that it then could have obtained a larger share of the total volume of business unless it induced a price war by cutting prices below those of competitors. That would have been a hazardous course to pursue. If the company had lowered the quality of its product, furthermore, it would have sacrificed a reputation that was influential in a portion of the market. Even though brand discrimination was not keen among a large class of purchasers, the company had at least a slight advantage in being able to appeal to buying motives which eventually might prove to be stronger than the motives to which most of its competitors could appeal.

The second aspect of this case is one especially worthy of note, since well-meaning reformists propose sporadically that the averred burden of advertising, for example, could be lifted from the shoulders of the community by having the government establish standards of quality and issue certificates or labels to be applied to those products which measured up to the standards.

In the case of fire prevention devices, the services of the Underwriters' Laboratories unquestionably have been of service to the insurance companies in furnishing them a guide as to what equipment and materials properly could be approved as means of lessening fire hazards and thereby warranting lower rates. The establishment of standards by that agency has tended to bring about improvements in the quality of some of the equipment on the market. The lessening

of fire hazards and reductions of insurance rates have been of benefit to the community at large.

Nevertheless, this case indicates that the establishment of minimum standards has tended to check improvements beyond that level and has handicapped the manufacturer of a superior product in securing recognition of the merits of his product by potential purchasers. In the instance of many other types of merchandise, moreover, where the protection of life and property is not involved as it is with fire prevention equipment, the establishment of standard tests and the issuing of labels certifying to the attainment of those standards would tend to check progress, by handicapping the manufacturers of improved products in securing brand discrimination. Many companies would not have the stamina shown by the Frenssen Company when it decided to continue to strive to secure recognition for the peculiar qualities of its product. Standardization of products is as likely to level down as to level up and tends to interfere with progress by deterring producers from attempting to make improvements.

November, 1928

M. T. C.



## VAIDEN CHEMICAL COMPANY<sup>1</sup>

### MANUFACTURER—CHEMICALS

**MERCHANDISING**—*Addition of New Products on Basis of Production and Market Analyses.* A leading producer of a certain chemical experienced a serious reduction in sales after the World War. Production capacity in the industry was excessive, and the company, moreover, had been very largely dependent upon a single customer, who discontinued his patronage. On the basis of detailed analyses of production costs and market possibilities, the company decided to begin to manufacture several other chemical products and to seek a specified sales volume for each, designed to produce the most satisfactory profit results.

**PRICING**—*Refusal to Use Price Reductions as a Sales Stimulus.* A chemical manufacturing company found it imperative to increase its sales. It decided, however, not to seek to accomplish this by means of price reductions, inasmuch as the total demand for its products was not elastic and price reductions probably would lead to a price war in the industry.

**MARKET SELECTION**—*Concentration upon Profitable Markets.* A chemical manufacturing company which experienced a substantial loss of sales following the World War analyzed its production and marketing situation with a view to improving its position. Among other policies, the company adopted that of concentrating its sales efforts in areas where it could secure freight rates as low as or lower than those of its competitors.

**SALES ORGANIZATION**—*Discontinuance of Sales Branch and Warehouse.* A chemical manufacturing company operated at a loss a branch sales office and warehouse located in a territory in which the company was under a competitive disadvantage with respect to freight rates. The company decided to discontinue this branch and to concentrate its sales efforts in territories nearer its plant.

(1923-1927)

The Vaiden Chemical Company, which for many years had been a leading producer of alate,<sup>1</sup> soon after the World War experienced a severe reduction in sales volume with consequent decrease in profits. The alate industry had overexpanded its production capacity to such an extent that nearly all producers were having difficulty in making satisfactory earnings. The unfavorable position of the Vaiden Chemical Company was precipitated by the loss of a single customer, who had been buying about 65% of the company's output.

<sup>1</sup> Fictitious name.

In 1923 new owners acquired the Vaiden Chemical Company, but for a year made no changes in the personnel. Operations continued to be unsatisfactory, however, and the owners installed a new general manager whom they instructed to make a report with recommendations for the restoration of the company to a profitable basis of operation.

Over 30,000,000 pounds of alate were used annually in the United States, the bulk of which was purchased in carload lots by less than 300 manufacturers. The purchasers of alate mixed it with other ingredients and sold the resulting products to manufacturers and the public; the cost of alate constituted but a small part of the total cost of most of these products. In 1924, alate was selling at prices between six and eight cents a pound. Most producers were competing on a price basis, but the Vaiden product was better than that of most competitors and usually commanded a price of from 5% to 10% above the average. In 1923, the Vaiden Chemical Company shipped nearly 3,800,000 pounds of alate, about 90% of which it sold on annual contracts. Approximately 45% of the sales were contracted for in November and December.

The distribution of alate was affected markedly by freight charges, although many producers sought to obtain a sales volume sufficiently large to permit production economies by equalizing freight rates, that is, by reducing the f.o.b. plant price in proportion to the amount by which the freight from the plant exceeded the freight charges from the plant of the competitor nearest any given market.

The general manager sought to determine how much the company could expect to increase sales with aggressive sales methods and to what extent it was advisable to add new products for the purpose of reducing overhead expenses.

In Exhibit 1 are presented the most favorable alternatives found by the general manager with regard to what products and what quantities of each might be made by the Vaiden Chemical Company. Although the new products suggested had no chemical relation to alate, they could be made without any appreciable increase in equipment. They were heavy chemicals to be sold to relatively few purchasers. Exhibit 1 shows the two or three prices of alate which the general manager thought reasonable to expect during 1925; the estimated profits or losses on alate, according to the volume produced and the price assumed;

the anticipated profits on a heavy chemical which the Vaiden Chemical Company distributed in the capacity of dealer for an allied company; and the estimated profits or losses on the suggested new products.

The amount by which additional output would decrease the cost of manufacturing alate is shown in Exhibit 2; costs per pound could be reduced chiefly through the reduction of overhead expense. The percentage of overhead to total bulk cost in each case is as follows: the average for the first 8 months of 1924 was

## EXHIBIT 1

ESTIMATED ANNUAL PROFIT OF VAIDEN CHEMICAL COMPANY IN 1925  
UNDER VARIOUS CONDITIONS

	Expected Selling Prices of Alate in Barrels (in Cents per Pound)	Profit on Alate	Profit as Wholesaler	Profit on New Products	Total
<b>ALTERNATIVE I</b>					
To make 600,000 lbs. of alate in one month, shut down the next, and sell 300,000 lbs. each month	5.90	\$27,302*	\$13,200	.....	\$14,102*
	6.00	23,728*	13,200	.....	10,528*
	6.25	16,568*	13,200	.....	3,368*
<b>ALTERNATIVE II</b>					
To make 600,000 lbs. of alate each month	5.90	3,458*	13,200	.....	9,742
	6.00	3,508	13,200	.....	16,708
<b>ALTERNATIVE III</b>					
To make 600,000 lbs. of alate each month plus 150,000 lbs. of A, 50,000 lbs. of B, 100,000 lbs. of C, 100,000 lbs. of D, and 39,000 lbs. of E	5.90	14,687	13,200	\$45,924	73,811
	6.00	21,379	13,200	45,924	80,503
<b>ALTERNATIVE IV</b>					
To make 300,000 lbs. of alate each month plus 150,000 lbs. of A, 50,000 lbs. of B, 100,000 lbs. of C, 100,000 lbs. of D, and 39,000 lbs. of E	6.00	1,089*	13,200	45,924	58,035
	6.25	6,071	13,200	45,924	65,195

\* Loss.



## EXHIBIT 2

COST TO VAIDEN CHEMICAL COMPANY OF MANUFACTURING ALATE  
UNDER VARIOUS CONDITIONS

(In Cents Per Pound)

	Actual Average Eight Months of 1924	Alter- native I	Alter- native II	Alter- native III	Alter- native IV
Direct Labor.....	.190	.156	.156	.190	.190
Direct Supervision.....	.067	.087	.043	.031	.050
Raw Materials.....	4.114	4.082	4.060	4.060	4.060
Maintenance:					
Labor and Material.....	.159	.117	.117	.117	.183
Tools and Supplies.....	.002	.004	.004	.004	.008
Power.....	.117	.138	.100	.055	.055
Water.....	.010	.004	.005	.005	.010
Steam.....	.146	.136	.117	.083	.099
General Plant.....	.148	.108	.075	.053	.086
Laboratory.....	.086	.096	.054	.038	.062
Total Manufacturing Cost.....	5.039	4.928	4.731	4.636	4.803
Overhead.....	.848	.973	.567	.425	.629
Total Bulk Cost.....	5.887	5.901	5.298	5.061	5.432
Shipping.....	.069	.069	.047	.047	.047
Packing.....	.282	.282	.360	.360	.360
Total Cost f. o. b. cars at plant.	6.238	6.252	5.705	5.468	5.839
Selling.....	.363	.363	.313	.313	.313
Total Cost.....	6.601	6.615	6.018	5.781	6.152

14.4%; Alternative I, 16.5%; Alternative II, 10.7%; Alternative III, 8.4%; and Alternative IV, 11.6%.

If all the 1924 contracts of the Vaiden Chemical Company were renewed, the average monthly shipments would amount to 315,000 pounds. With a view to determining the feasibility of increasing the sales of alate to 600,000 pounds a month, the amount specified in both Alternative II and Alternative III, the general manager made a study over a period of eight months to find out the national consumption of alate, the location of each carload-lot consumer, the amount each purchased, the source of purchases, the date of expiration of contracts, and the freight rates from points of production to points of consumption.

Some of the detailed results of this study are recapitulated in Exhibit 3 to show the consumption of alate in various areas figured on the basis of freight rates from the plant of the Vaiden Chemical Company. On all shipments in Territory X the company had an advantage in freight rates of 30 cents per hundred pounds. In the area where the freight rate was less than 21 cents, the Vaiden Chemical Company had an advantage in rates varying between 1 cent and 20 cents. In the area where rates from the Vaiden plant were from 21 cents to 30 cents, the company had equal rates as compared to the nearest competitor. For sales made outside of these areas, the Vaiden Chemical Company had to equalize freight charges.

## EXHIBIT 3

POUNDS OF ALATE SOLD IN CARLOAD LOTS IN FIRST EIGHT MONTHS OF 1924 BY ALL PRODUCERS, BY FREIGHT AREAS FIGURED FROM VAIDEN PLANT  
(ooo omitted)

Company	FREIGHT RATE PER HUNDRED POUNDS								Total
	Less than 21¢	21¢-30¢	31¢-40¢	41¢-50¢	51¢-56¢	57¢-70¢	71¢-80¢	Territory X*	
Vaiden Chemical Company.....	1,475	1,215	.....	117	.....	.....	90	705	3,602
Company 1 .....	1,115	3,255	575	3,102	2,820	405	1,390	830	13,492
“ 2.....	630	397	150	305	300	150	30	140	2,102
“ 3.....	100	475	300	.....	.....	.....	.....	.....	875
“ 4.....	125	.....	.....	70	.....	.....	.....	.....	195
“ 5.....	620	120	.....	1,150	700	1,600	1,210	150	5,550
“ 6.....	.....	.....	.....	.....	.....	1,140	500	.....	1,640
Source of Purchase Unknown	.....	320	200	630	535	240	300	200	2,425
Total.....	4,065	5,782	1,225	5,374	4,355	3,535	3,520	2,025	29,881

\* The freight rates to consumers in Territory X varied considerably and in this territory the Vaiden Chemical Company had an advantage of 30 cents per hundred pounds over the nearest competitors.

As a part of his study, the general manager made a report on the profitableness of the company's branch office and warehouse, located over 1,000 miles from the plant, in a territory where the company had to equalize freight rates. Sales made through this office were entirely l. c. l. shipments. It was anticipated that practically all sales made through the branch, which had amounted to 223,230 pounds during the 12 months prior to October, 1924, would be lost if the office were discontinued, unless some other arrangements could be made. Moreover, certain

fixed charges, which the branch bore and which had been as follows for the 12 months prior to October, 1924, would have to be absorbed by the company if the sales in this territory were lost:

Fixed manufacturing cost.....	\$3,598.44
Fixed shipping and selling expenses.....	543.84
Total.....	<u>\$4,142.28</u>

Although the year's loss in operating the branch amounted to \$2,165.91, discontinuance of the office would put an added burden of \$1,976.37 on the company.

The conclusions and recommendations of the general manager are quoted, in part, as follows:

The average cost of Vaiden alate for the first eight months of 1924 was 6.60½ cents per pound in barrels to which must be added a percentage of the fixed charges, on account of the 45-day shut-down, amounting to 14 cents per hundred pounds, making a total cost for the first eight months of 6.74½ cents per pound. A particular study has been made and definite figures established which show that the present selling price on alate ranges from 6 cents to 6¼ cents f. o. b. plant in barrels, which is ½ cent to ¾ cent below our present cost of production.

In view of the wide difference between present cost and selling price, it is essential that some action be taken towards increasing profit, or a large loss will be shown during 1925. Manufacturing cost has increased slightly in proportion to the reduction in output. Furthermore, the level of selling prices has worked down approximately ½ cent per pound as compared with prices quoted on contracts last fall.

An analysis of these statements shows that we can make a profit by following Alternatives II, III, and IV; but in order to do so, it is necessary to assume a profit on new products which we have yet to establish on the market. Alternatives II and III are the ones which show the greatest promise of profit.

All correspondence and reports were carefully gone over and all opinions possible obtained on competitive conditions; several trips were made with the combined idea of getting acquainted with the trade and definitely determining current selling prices.

The actual level of selling prices today, except under special conditions, is 6 cents to 6¼ cents in barrels f. o. b. point of manufacture, depending on the tonnage and local conditions. In one instance, a quotation of 5¾ cents delivered in bags was found.

In considering whether to attempt to increase our alate tonnage to a point where our production cost is even with or below the sales price, thorough consideration must be given to its effect on the general level of selling prices. In this connection, however, our selling prices on the past year's business and current quotations are from ⅜ cent to ½ cent above the market, so that we may come down to the competitive price without materially affecting the general conditions in the



alate market. If, however, we should find it necessary to go below the general level of alate prices in obtaining additional business, there is a question as to whether the selling price would be decreased to such an extent that our saving in cost of production would be offset and no additional profit derived.

The present annual business averages approximately 3,600,000 pounds of alate. As to additional business, in the freight zone under 31 cents from our plant and in Territory X, where we have equal or better freight rates as compared to the nearest producers, the total available business, not including our own, is about 9,000,000 pounds a year. If we could get half of this business, our annual sales would be 8,100,000 pounds, or 675,000 monthly. It should be remembered, however, that some of our competitors are exceedingly strong in our territory, one competitor having over half of the total available business.

In order to map out a sales campaign, first it must be decided whether to solicit on a price basis the business of all our competitors. Since most contracts will be placed prior to January 1, it is also reasonable to assume that out of the above tonnages, we would only have time to go after the larger contracts.

The next section of the general manager's report summarized data in regard to markets for the proposed new products. In general, the report was favorable to each, though some objections were raised.

The recommendations in summary were that the Vaiden Chemical Company "attempt to sell 600,000 pounds of alate monthly during 1925, following Alternative III as closely as possible; and that the branch office be continued until the total sales volume becomes larger."

The president did not accept the recommendation of the general manager to follow Alternative III as a policy to be put into effect immediately. His objection was based primarily on the belief that his company could not reach within a year or two a volume of 600,000 pounds of alate monthly without reducing its price below cost, that is, considerably below 5.80 cents a pound.

He pointed out that the demand for alate was a derived demand, that the industry upon which the sales of alate depended showed little prospect of expansion, that the sales of the Vaiden Chemical Company could be increased only with a proportionate loss to competitors, and that, therefore, the company could secure no great increase in sales within a short period without making offers to buyers substantially more favorable than offers of competitors. The more favorable offer necessarily would have to be a price reduction, the president said, because the quality of

alate produced by the Vaiden Chemical Company was not sufficiently superior to command a price higher than the average, except from those relatively few companies which knew of, and appreciated, its qualities. He believed that the company could attain such a favorable position only over a period of several years and only with the aid of competent salesmen and a technical sales staff, which the company as yet had not developed.

The choice of price-cutting he considered undesirable, because, first, it would accentuate price competition in the industry, which already was in an unsatisfactory state because of such practices; second, there was no assurance that the company could secure the desired volume of sales, for competitors might retaliate with similar price reductions; and third, even if it did gain the desired volume, the price concessions necessary probably would bring serious losses to the company.

The president, therefore, did not follow Alternative III but, because he considered his manager's analysis of costs and of the markets for the chemicals A, B, C, D, and E to be satisfactory, he adopted Alternative IV. The company inaugurated the following marketing policies: concentration of sales efforts in areas where the Vaiden Chemical Company had freight rates equal to, or better than, those of its competitors; the establishment of personal contact with all buyers in these areas by means of a new and competent personnel; advertising in industrial papers, stressing particularly the high quality of alate made possible by a process developed and patented by chemists whom the company employed and, secondarily, emphasizing the change in management and the stability and power of the Vaiden Chemical Company in the alate industry; and the establishment of technical sales service especially with a view of testing formulas of customers in order to aid them in improving their products.

The branch office and warehouse were continued for a year longer until sales in the territory were replaced by business contracted for in towns or cities nearer to the point of production. It so happened, however, that upon the discontinuance of the branch, the Vaiden Chemical Company was able to make arrangements with a public warehouse in the city where the branch had been located whereby alate could be stored and delivered to customers at a charge which enabled the company to sell in l. c. l. lots at a profit, provided it expended practically no sales effort

in this area. Most of the customers of the branch continued to buy alate from the Vaiden Chemical Company.

Within two years after the adoption of the new production and sales policies, the company reached a profitable basis of operation. It had discontinued the manufacture of two lines, however: Chemical A, because of a competitor's ability to produce a satisfactory material as a by-product at a much lower cost; and Chemical B, because of an interpretation of the tariff unfavorable to its production. On the other hand, the company had added and sold two new products at a profit, and had developed a third from its experience with Chemical A.

In 1927, the company's sales of alate amounted to nearly 600,000 pounds monthly. The favorable showing of the company was made in the face of severe competition, which further had depressed the price in 1925 and which had forced two competitors to discontinue production. The growth of sales, moreover, was obtained without sacrificing the 5% to 10% margin which the company's alate commanded over the average price, for the president did not favor attempting to increase sales at the expense of profit. For the same reason, the company concentrated sales efforts in sections of the country relatively near to the plant of the Vaiden Chemical Company with results shown in Exhibit 4.

## EXHIBIT 4

POUNDS OF ALATE SOLD BY THE VAIDEN CHEMICAL COMPANY IN 1924 AND 1927, ACCORDING TO FREIGHT DIFFERENTIALS AS COMPARED TO NEAREST COMPETITORS

	AMOUNT OF FREIGHT ADVANTAGE OVER COMPETITORS				EQUAL RATES	AMOUNT OF FREIGHT ADVANTAGE OF COMPETITORS			TOTAL
	20 cents and over	15 cents	10 cents	5 cents		5 cents	10 cents	15 cents	
1924....	672,000	1,000,000	50,000	1,550,000	100,000	.....	.....	600,000	3,972,000
1927....	645,000	1,409,000	684,000	1,674,000	392,000	650,000	80,000	.....	5,534,000

COMMENTARY: The analysis of its problem which the Vaiden Chemical Company made provided the basis for a sound decision. That decision resulted in an increase in the volume of production, which utilized surplus plant capacity; excess overhead costs were disposed of; the company's market was diversified; and it was rendered more independent of a few large customers, such as the one who in 1923 was taking 65% of the company's output.



The most significant point in the company's decision, however, was to forbear engaging in a price war. The president sanely recognized that, if the company sought to increase its volume of sales merely by reducing prices, competitors were certain to retaliate, with the result that his company was likely to receive no larger a share of the total volume of business than it previously had obtained, with prices lower and losses greater. In this business, as in many others, the total demand could not be increased, except perhaps over a very long period of time, merely by reducing prices. If a reduction in prices did not stimulate an increase in the aggregate demand, then a price war was inevitable, as each competitor would seek to retain at least his share of the market even at a loss. The Vaiden Chemical Company chose the constructive alternative.

November, 1928

M. T. C.

## UNITED STATES GUTTA PERCHA PAINT COMPANY

### MANUFACTURER—PAINT

**MERCHANDISING—*Expansion of Line.*** A company which specialized in the manufacture of high-grade white paint, of which about two-thirds was sold to industrial users and the remainder to the consumer market, contemplated adding colored paints to its line. Because it had established an outstanding reputation for itself as a specialist in the manufacture of white paint and had for many years stressed the advantages of white paint over colored paints, the company decided not to add colored paints to its line.

**DISTRIBUTION CHANNELS—*Use of Wholesalers Supplemented by Missionary Sales Work.*** A company manufacturing high-grade white paint decided that wholesalers, through whom it was distributing its product, could not be depended upon to reach industrial users, who constituted the company's major market. The company decided to continue to fill orders from industrial users through wholesalers, in order to avoid increasing its branch stocks, but to employ missionary salesmen to solicit orders from those users.

(1928)

The United States Gutta Percha Paint Company, by patented process, manufactured a special type of white paint both for inside and outside use on buildings of any kind. The company sold this paint under the widely advertised trade name of *Barreled Sunlight*. At various times it had been suggested that the company should manufacture and sell a full line of colored paints, instead of concentrating upon white paint exclusively. This problem was purely a marketing one, inasmuch as the company was fully equipped to make colored paints.

The United States Gutta Percha Paint Company was located in Providence, Rhode Island. Its annual volume of sales amounted to several million dollars.

Until 1927 the company had made little effort to sell paint for outside use except to large textile mills owning houses and operating stores for their employees. In 1927 the company put on the market an improved type of outside paint, and after that time it advertised its outside paint, as well as its interior paint, for

general use. The outside paint like the inside paint was produced in the white, and was sold under the name of Barreled Sunlight. The company did not seek to sell its paint for use in painting furniture or for similar purposes. Barreled Sunlight was a slow drying paint and was not deemed suitable for such uses. It was used almost exclusively for walls, ceilings, and exteriors of buildings.

Barreled Sunlight was of so exceptional a quality as to compete not alone with ordinary types of white paint, but also with white enamel. It was stated that Barreled Sunlight had a smoother surface than could be obtained with ordinary paints and enamels and that it consequently was more resistant to the collection of dirt; that Barreled Sunlight retained its whiteness longer than other paints or enamels; that repeated washings with water did not injure it; that it was unusually opaque so that fewer coats were needed than in the case of other paints or of enamel; and that it was more easy of application, so that labor costs were less, not only because of its longer wearing qualities and the fewer coats needed, but also because it could be applied in less time. Barreled Sunlight was higher in price than other white paints, but it was not so high in price as enamel.

The company had two distinct markets for its paint. One was the industrial market. Many industrial firms used Barreled Sunlight in large quantities for maintenance purposes. Such firms usually bought the paint in 30 or 55-gallon drums or, in some instances, in 5-gallon buckets. The company's other market consisted of persons buying paint in small quantities chiefly for home consumption. For that market the company sold paint in cans of from 1 gallon to  $\frac{1}{2}$  pint. In addition to large manufacturing plants, Barreled Sunlight was used for residences, hospitals, schools, bakeries, laundries, stores, and other buildings. There were 80,000 names on the company's industrial mailing list. Some of the firms on this list were small, but they all had good credit ratings. About two-thirds of the company's sales were of bulk goods for the industrial market, and about one-third were of goods in cans.

With the exception of a part of the New England territory, where it had sold directly to users ever since its organization, the company sold its product through distributors. At least 85% of its sales were made in this way. Distributors of Barreled



Sunlight were wholesale firms selling paints, wall paper, window glass, and various allied items. In addition to selling Barreled Sunlight, they sold full lines of colored paints made by other manufacturers. In 1928 the company was represented by 125 such wholesalers. Each wholesale firm had an exclusive sales territory limited to the city in which it was located.

The company had no stock or order requirements for its distributors other than the general requirement that they must carry sufficient stocks to meet the needs of their territories. Distributors representing the company in the Middle West, West, and South bought in carload lots; distributors in the East, nearer the company's factory, tended to buy in smaller quantities. A distributor's average stocks of Barreled Sunlight amounted to \$7,000 to \$8,000. Distributors located in large cities commonly carried a larger stock than this, while, on the other hand, some of the smaller distributors carried less.

The company had a salesforce of 45 men. Those salesmen took orders from distributors, but their chief task was to solicit orders from the industrial market. The sales manager of the company stated that the company's own salesmen were responsible for 90% of the sales to industrial users. Orders which they took from users were filled by the wholesalers. On their calls upon industrial users, the company's salesmen seldom were accompanied by wholesalers' salesmen. The wholesalers' salesmen called upon retailers and took orders for Barreled Sunlight in the small cans.

When the company first made use of distributors, it had depended upon them to reach the industrial market as well as the retail market. It soon had become evident, however, that the wholesalers' salesmen were not well fitted for selling to industrial users. They were accustomed to selling to retailers rather than directly to large users. Moreover, they had many items to sell and hence could not concentrate on any one. The sales manager of the United States Gutta Percha Paint Company explained that while a salesman selling the company's product to industrial users needed to know all about the product, its application, and advantages, there was nothing particularly involved or technical in the work. Nevertheless, the persons with whom such a salesman commonly had to talk required a different type of sales approach from that required by retailers. In some instances the

purchasing agents for industrial firms bought paint; in others the actual purchasing was done by maintenance engineers; and in others, when an entire plant was to be painted for instance, the general manager or other executives had to be seen. It was part of the salesmen's task to discover in each instance the proper person to see.

Since practically the entire sales burden for the industrial market was borne by the company's own salesmen, the company might have filled bulk orders directly and used distributors merely for the retail market. To do this, however, it would be necessary for the company itself to maintain stocks at numerous points, inasmuch as ability to make quick delivery commonly was an important factor in industrial sales. The average gross margin of the company's distributors on Barreled Sunlight in bulk was  $17\frac{1}{2}\%$ ; this was sufficient, it was estimated by executives of the company, to meet the distributors' warehousing, handling, and other direct costs and to allow a net profit, after those costs, of 10% to 12%. The company was of the opinion that for it to sell directly, from branch stocks, would be more costly. Under the existing arrangements the company maintained small stocks in seven or eight cities. Those stocks were to meet emergencies and could not be drawn upon by distributors except at a higher price than was charged for factory shipments.

Executives of the company were convinced that the company's interests lay with the wholesalers. Inasmuch as the company had a single item to sell, the executives did not believe that it was in a position to establish branches and sell directly. For this reason the company sought to protect its distributors. It gave them exclusive sales territories and it refused to sell directly to retailers at the prices given to wholesalers, regardless of the quantities purchased. The company had one discount which it gave wholesalers and no one else and this discount was not affected by size of orders.

The company also, in order to protect its distributors as well as the reputation of its product, did not sell to chain store companies. Executives of the company were of the opinion that chain store distribution would increase in the future rather than decrease. Nevertheless, if Barreled Sunlight was sold in chain stores it was their opinion that sales of unit retailers would be interfered with, that serious price cutting inevitably

would follow, and that the quality reputation of the product would be impaired.

Although the company allowed no quantity discounts, it had a plan in effect whereby sales of what it looked upon as key retailers, located in metropolitan areas, were stimulated by means of a deferred discount. According to this plan, if a key retailer's sales of Barreled Sunlight reached a specified volume during a given year, the wholesaler from whom the retailer purchased paid the retailer a rebate of 10% on his total purchases of Barreled Sunlight during the year just past. The retailer's usual discount was 25%. This arrangement was made with about 300 of the 7,000 retailers selling Barreled Sunlight. It had not led to price cutting.

The company's 45 salesmen, in addition to soliciting orders from wholesalers and from industrial users, rendered some assistance to wholesalers' salesmen calling on the retail trade. The company's salesmen did not visit retailers, but they did advise and instruct the wholesalers' salesmen in use of window displays and in matters pertaining to the sale of Barreled Sunlight.

The company also, in 1927, had added to its salesforce five men who devoted their full time to calling upon retailers in company with the wholesalers' salesmen. These men spent several weeks with one distributor, and then went to another distributor. They solicited orders from retailers, but that was not their primary function. Their primary function was to sustain the interest of the distributors' salesmen in Barreled Sunlight, and to illustrate to those salesmen sound methods of selling the product. Increases in sales to the retail trade following the employment of these men convinced the company that its policy in this respect was sound. In one year the five salesmen obtained 1,000 new retail accounts for the company's distributors. This opening of new retail accounts was important inasmuch as the company did not as yet have complete retail coverage in all parts of the United States. The sales manager stated that distributors welcomed this assistance from the manufacturer.

The five salesmen for the retail trade were paid salaries and expenses. Each of the 45 salesmen for the industrial market had a permanent territory. Those salesmen were paid salaries based on an estimated volume of sales for their territories and were given commissions on all sales in excess of this estimated volume.



The United States Gutta Percha Paint Company was an extensive advertiser. It advertised in trade and general magazines and also directly by mail. Its product was thought to be well known to all types of paint users. Since the company made white paint exclusively, it had devoted much of its advertising and sales efforts to establishing in the minds of paint users the advantages of white paint over colored paints. It was pointed out, for example, that white paint was better than colored paint for finishing the interiors of factory buildings, because the white paint served to make the buildings lighter. For interiors of bakeries, hospitals, and so on, white paint was recommended because of the element of cleanliness. Executives of the company were of the opinion that the advantages of white paint for many purposes had come to be quite generally recognized, especially in the industrial field.

Not only had the company pointed out to users the advantages to be derived from use of white as contrasted with colored paints. It also had stressed the advantages of white paint from the distributors' point of view. It was necessary for paint wholesalers and retailers to carry relatively large stocks of colored paints, since each color had to be carried in a variety of sizes of containers. Moreover, the rate of stock-turn tended to be much more rapid for white paint than for a line of colored paints. Demands for different colors varied from time to time with the result that distributors commonly had difficulty in moving part of their stocks of colored paints. The rate of stock-turn of wholesalers' stocks of Barreled Sunlight in bulk was stated to be, at a conservative estimate, five to seven times a year; and the rate of stock-turn for the full line, including the canned goods, was estimated to average five times.<sup>1</sup>

On the other hand, there was a much wider market for a line of colored paints than for white paint alone. It seemed reasonable to think that the high reputation of Barreled Sunlight would assist the company in any effort it might make to sell colored paints. No production difficulties were involved, and no increase in production costs would follow. Moreover, colored paints manufac-

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<sup>1</sup> "The common rate of stock-turn for the paint and varnish wholesalers reporting to the Bureau for 1926 was 3.6 times a year. The interquartile range was from 3.0 times to 4.2 times a year." Bureau of Business Research, Harvard University, Bulletin No. 66, *Operating Expenses in the Wholesale Paint and Varnish Business in 1926*, p. 7.

tured by the company would have the same qualities of smoothness, opacity, ease of application, and so forth, that were possessed by the white paint.

To meet in some degree the demand for colored paints, the company always had advocated the use of the ordinary type of oil colors in conjunction with its white paint. Three years prior to 1928 the company itself had begun to produce tinting colors, particularly adapted for use with its product, that could be employed by users in producing any tint desired. These colors were packed in tubes of various sizes, and stocks of them were carried by the company's distributors. Any tints desired could be obtained easily by mixing the proper quantity of coloring with Barreled Sunlight. The coloring blended readily and with good effect. It was not possible, however, to obtain strong colors in this way, but only tints and shades such as cream and buff and pale blue.

The company pointed out to its wholesale and retail distributors that a comparatively small stock of Barreled Sunlight combined with a stock of the tubes of tinting colors took the place of a much larger stock of colored paints and enamels. The sales manager stated that whereas 18 to 24 gallons of Barreled Sunlight, in cans of various sizes, and 24 dozen tubes of coloring represented a complete stock for an average retailer, a stock of enamels in six shades, which was regarded as a minimum number, would amount to at least 66 gallons. The company also agreed to match any color sample submitted without extra charge on all orders for five gallons or more. The sales manager stated in 1928 that at least 80% of the total quantity of Barreled Sunlight used was used in the white. His observations led him to believe that there was a growing demand for tinted paints for household use but that for industrial purposes white paint had come to be used almost exclusively.

Another advantage of selling white paint and tinting colors was that users were not restricted to the shades in the colored lines, but could obtain any shades they desired. Observations made by the company's salesmen and distributors indicated that some consumers much preferred to make up their own shades whereas others did not wish to go to that trouble. There appeared to be a tendency, revealed particularly in articles appearing in women's and household magazines, for women to be more inter-

ested than formerly in the decoration of their homes, so that they could be expected to be desirous of obtaining special, nonstandard tints for walls and woodwork. Painters, the sales manager stated, customarily preferred to mix their own colors. For this purpose they used oil colors and it was not anticipated that they would make use of the tubes of tinting colors prepared by the company. This fact did not trouble the company, however, inasmuch as the tinting colors were offered merely as a means of increasing sales of the white paint.

In its advertising the company explained the possibilities of using Barreled Sunlight in colors. In a pamphlet circulated among industrial plants, for instance, the following statement appeared:

#### Barreled Sunlight in Tints and Colors For Dado Work

The same qualities that give Barreled Sunlight its washable smoothness, spreading capacity and durability, make it ideal for dado work and other places where tints or colors are desired. Can be readily tinted on the job. In lots of five gallons or over we tint it any color without extra charge.

In a circular prepared with particular reference to office buildings it was stated:

#### Meeting the Vogue for Color

Barreled Sunlight lends itself readily to tinting. That smooth, velvety lustre that everywhere identifies it in the white, gives when tinted, a richness and depth of finish most practical and pleasing to the eye. Simply by the addition of ordinary colors-in-oil, beautiful, clear, lasting tints are produced.

Quantities of 5 gallons or over are tinted to order at the factory, without extra charge.

When used in the pure white, Barreled Sunlight is guaranteed to remain white longer than any gloss paint or enamel, domestic or foreign, applied at the same time and under the same conditions.

Many building managers now do all their interior painting with this one superior product—white and tinted.

The company also enclosed color cards, showing colors that had been obtained with Barreled Sunlight and the special tints, in its circulars to customers. Most of the company's advertising, however, was concerned with the merits of its white paint, and the references to the use of colors were incidental. The following quotation from a circular entitled "From the Standpoint of Whiteness" is typical of much of the company's advertising:



Testimony from industrial leaders on the paint that  
*remains white longest*

The experience of others is a pretty safe guide in buying anything that must prove its value over a considerable period of time! This is particularly true of white paint.

Many interior paints are reasonably white when first applied, but most of them turn distinctly yellow after a short time on ceilings and walls.

The letters quoted in this folder, testifying to the long-lasting whiteness of Barreled Sunlight, come from some of the best known and most efficiently managed plants in America. They represent years of experience in buying and using white paint, in many lines of industry and under widely varying conditions.

On request, we shall be glad to send you our booklet, "More Light," and a painted panel showing the intense whiteness of Barreled Sunlight, the Rice Process White.

The following quotations are taken from the company's booklet entitled "More Light":

PLAIN FACTS about the remarkable service Barreled Sunlight offers are the strongest arguments in its favor. Below are briefly stated six important features—further amplified on the following pages:

Increases light from 19% to 36%.

Presents a smooth, impervious finish that resists dirt.

Washable and sanitary like white tile.

Guaranteed to remain white longest.

Costs no more on the finished job than many paints priced less per gallon.

Can be readily tinted for dado and other work.

*How Barreled Sunlight Answers a Big Industrial Problem*

Plant owners and managers in every line of industry appreciate the value of white paint on ceilings and walls. They recognize that a well-lighted, clean interior is essential for obtaining the highest degree of working efficiency.

The big question today, then, is—*what white paint is the most satisfactory and economical to use?*

It is that paint which not only produces a light-reflecting, clean finish at the start—at a reasonable cost—but maintains these qualities over the longest period of time, thereby reducing the number of repaintings with their attendant cost and their disturbance of factory routine.

Such a combination of quality and economy was developed in Barreled Sunlight, by breaking away from all established formulas and methods of making paint—which resulted in the discovery and development of the famous "Rice Process" of manufacture.

No other paint manufacturer had advertised white paint to the extent that the United States Gutta Percha Paint Company had. Other paint manufacturers sold white paint as one item in a line rather than as a line in itself. After Barreled Sunlight had been advertised widely, various paint manufacturers had introduced white paints under special trade names, but none of those paints had been emphasized as Barreled Sunlight was emphasized. Although executives of the company recognized that, in spite of the extensive advertising of Barreled Sunlight, to many people white paint still was merely white paint, they were convinced that a valuable brand discrimination had been established.

The question raised was whether the company should sell a line of colored paints already prepared, instead of merely coloring paint to order and selling tubes of coloring. Several of the company's distributors had asked it to do this. In 1925 the company had given serious consideration to the matter. At that time it had experimented by making up a complete line of colored paints for two of its distributors, at their request. Neither the company nor the distributors did any advertising or special sales work for the colored line. The distributors failed to sell the greater portion of this paint during the following year, and at the end of the year, the company accepted the return of the unsold stocks. Again in 1928 the company, at the request of one of its distributors, made up a line of colored paints for that distributor. The results of this experiment were not available in November, 1928.

The executives of the company, after considering the matter, decided that the company should continue to concentrate upon the sale of white paint. The company had built up a high reputation for itself as a specialist in the manufacture of white paint. By such specialization, it had in a substantial measure raised its product out of the class of severe competition on a price basis into the class of specialty goods. The company planned to continue to produce tubes of colors and to explain in its advertising the possibilities of obtaining tints with Barreled Sunlight. This was to be incidental, however, to the advertising of Barreled Sunlight in the white, especially in so far as advertising to industrial users was concerned. In that advertising the possibility of tinting the paint merely would be mentioned; in advertising to the consumers' market the question of color would be given somewhat more attention, but still would be incidental.

The executives wished the company to be looked upon as the outstanding manufacturer of white paint in the United States.

COMMENTARY: The United States Gutta Percha Paint Company had attained brand discrimination in the industrial market through specialization, and its decision not to engage in the manufacture and sale of colored paint was in accordance with the policies by means of which prestige for its brand had been attained. In its advertising and selling the company had dwelt consistently upon those features and uses of its product which were dependent upon the product's whiteness, and hence clearly had identified itself in the minds of users as a manufacturer of white paint. In that segment of the industrial market for which the company's paint was best suited and to which the company had chiefly addressed itself, an advantage had been gained by specializing on white paint. In that market the company clearly would have nullified its prestige, partially at least, by offering a line of colored paint. The fact that the paint was not quick drying rendered it less satisfactory than certain other types of paint for use in finishing products; hence that other segment of the industrial market could not have been cultivated extensively even with a line of colored paint; that is, unless a new special type of paint had been produced and sold under another brand name.

The sales which the company made in the consumers' market were secondary to the industrial sales. In the consumers' market a large demand existed for colored paint, but there was no apparent reason for believing that the supply from other manufacturers was inadequate for filling that demand or that this company could have won a substantial share of the colored paint market among consumers except at heavy cost. If the company had decided to add a line of colored paint for the consumers' market, a special and large scale advertising program would have been needed, for it would have been necessary to establish a new brand name, since Barreled Sunlight was not a suitable name for colored paint, and to divert demand from established brands to the new brand. Many new retailers probably would have been needed, and possibly extensive changes in the company's method of distribution would have been precipitated. In view of the keenly competitive conditions in the paint trade and the uncertainty as to the imminence of chain store domination in the retail paint business, the profits to be gained by the company in offering a line of colored paint would, at best, have been problematical. The company decided upon the safer course.

December, 1928

M. T. C.



## FILTON MACHINERY COMPANY<sup>1</sup>

### DISTRIBUTOR—MACHINE TOOLS

MERCHANDISING—*Basis for Making Additions to Line.* A distributing company selling about 20 lines of machine tools, for most of which it was the exclusive representative in its territory, in deciding whether to accept additional offers of exclusive agencies for well-known lines considered the following factors: whether it already had contact with the market for the new line; whether such an agency would interfere with sales of its other lines; and whether some other type of distribution was more suitable for the new line.

(1927-1928)

The Filton Machinery Company was a distributor for about 20 lines of machine tools, for most of which it had exclusive agencies. The company had been in operation for many years and had a reputation for reliability. Its annual sales volume was approximately \$1,000,000. During 1927 and 1928 the company was offered exclusive agencies for several well-known lines of machines.

The machine tools which the Filton Machinery Company sold were used for grinding, boring, drilling, shaping, planing, and milling. The company sold to dozens of different industries; among its chief types of customers were shipbuilders and manufacturers of automobile bodies, railroad cars and equipment, textile machines, electrical equipment, and candy machines. The machines ranged in price from \$100 each to \$35,000 each; but the greater proportion of sales were of machines priced at from \$5,000 to \$10,000 each. The discounts received by the Filton Machinery Company from the machine manufacturers amounted to between 10% and 12½%.

The company employed 4 salesmen, who were paid on a straight salary basis. They kept in contact with approximately 1,000 customers, who were located within about 100 miles of the large industrial city where the company had its office. Each customer was called on from 6 to 12 times a year except when he was actively

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<sup>1</sup> Fictitious name.

in the market, under which circumstances more frequent calls were made. Most orders received were for from 1 to 3 machines. The salesmen had no formal engineering training, but 3 of them had had experience in machine shops.

Most of the lines carried by the Filton Machinery Company were of standard design and were used for purposes familiar to men with mechanical training; in such cases little technical sales work was required either on the part of the Filton Machinery Company or of the manufacturers of the tools. Nevertheless, considerable engineering service was required in making special applications of standard equipment to secure for the user increased productivity or lower operation expense. The manufacturers of the machine tools usually furnished this service, at times making a charge for it. When a new type of machine was introduced, the manufacturer customarily furnished a man to demonstrate the machines to purchasers after installation.

In 1927, the Rhone Company<sup>2</sup> offered the Filton Machinery Company an exclusive agency for its line of moulding machines, which sold at prices of from \$200 to several thousand dollars. These machines were of high quality and were well known. The Filton Machinery Company, however, decided not to sell the Rhone machines. Those machines were used in iron and steel foundries; whereas the machines already marketed by the Filton Machinery Company were used for metal working purposes in machine shops. The company had no contact with foundries, except in cases where its customers also operated foundries in addition to machine shops; the company estimated that about 5% of its customers had foundries. The president of the Filton Machinery Company stated that manufacturers' agents and machinery wholesalers obtained economy in selling by carrying several related lines used by the same customers.

The Filton Machinery Company also was offered an exclusive agency for a reliable line of light-duty grinders selling at \$1,900 each. This line at the time was handled by several agents in the city in which the Filton Machinery Company was located. The company already was selling a line of heavy-duty grinders at prices ranging from \$2,900 to \$20,000. The light grinders and the line of heavy grinders were not strictly competitive, the former machines being best adapted for producing 15 to 25 pieces per

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<sup>2</sup> Fictitious name.

given time unit and the heavier machines being more economical for larger quantity production.

The Filton Machinery Company agreed to represent the manufacturer of the light grinders but refused to accept an exclusive agency for the line. The president of the company stated that if the company held the exclusive agency, it would be expected actively to promote sales of the light machines; such action not only might interfere with sales of the heavy grinders but also might interfere with the interests of the company's customers. Although the two lines of machines were not strictly competing, the president believed that there would be a tendency for the salesmen to recommend the light and cheaper machines in order to make a sale, even though those machines were not best suited to the customers' purposes. The president was of the opinion, however, that if the company merely represented the manufacturer of lighter machines along with several other representatives in the same territory, there would be no likelihood of the Filton salesmen selling those machines when it was not to the best interest of the customers. It was a strict policy of the company to protect the lines of its regular sources, as well as to protect the interests of its customers.

The Filton Machinery Company later was offered an exclusive agency for a line of power and hand scrapers which were used in metal working. The same type of customers to whom the company already sold also had use for scrapers. The power scrapers were priced above \$800 each but the hand scrapers sold at approximately \$125. The company could not have the agency unless it handled both types of scrapers. The president, however, believed that the low-priced tools should be sold through specialty equipment firms. The volume of sales of hand scrapers would be small; and those tools could be sold by low-salaried salesmen. The company might have considered adding a power scraper to its line; but the president was convinced that it would be inadvisable to accept the offer.

COMMENTARY: Here is an example of a firm of industrial merchants which was adhering consistently to a sound policy. The firm had defined its market. It was handling only such goods as could be sold advantageously in that market, by the type of salesmen which it employed. And it was avoiding the acceptance of stated or implied obligations to go outside its market or to perform services that it was



not prepared to render. Such a firm as this could be relied upon by a manufacturer for whose product it accepted an agency and it could be depended upon by its customers. It was performing a true merchant's function by serving faithfully both manufacturer and user.

March, 1928

M. T. C.

## RICHWELL SUPPLY COMPANY<sup>1</sup>

### DISTRIBUTOR—MILL SUPPLIES

MERCHANDISING—*Simplification of Line.* A mill supply firm wished to reduce its investment in inventories. Two items in which inventories were heavy were Swiss pattern files and machine-cut files. The company was carrying two directly competing brands of each of these types of files. In view of unsatisfactory gross margins and unnecessary duplication of stocks, the company decided to replace three of its four lines of files with some other one line. The company's selection of a new line to carry was in part determined by the fact that the manufacturer followed a policy of granting exclusive sales territories to distributors.

(1926)

The Richwell Supply Company, a large mill supply firm, in 1926 began reducing its investment in inventories in order to increase its rate of stock-turn and to improve its credit position. The reduction in most instances was effected by eliminating certain items in a line or by decreasing the number of units stocked of various items. In the case of the files that it sold, however, the company decided to reduce the number of lines by replacing three existing lines with one line not previously stocked.

The Richwell Supply Company carried thousands of items of machinists' tools and supplies, mill supplies, gears and bearings, and general hardware. About 10% of the company's volume of business consisted of cash sales made to small purchasers who bought at the company's store. Over-the-counter purchases of large users, chiefly manufacturing companies buying on charge accounts, amounted to 30% of sales. The remaining 60% of sales was delivered in response to mail, telephone, or salesmen's orders.

Eight salesmen were employed for selling over the counter and three for receiving and soliciting orders by telephone. For outside selling the company employed seven men, each having a definite territory. Most of the salesmen's time was spent within a 25-mile radius of the company's store; at more distant points

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<sup>1</sup> Fictitious name.

the salesmen came into competition with salesmen from mill supply firms located in other cities. One of the salesmen, who had some practical mechanical training, specialized on selling gears and bearings. But otherwise the salesmen had no particular technical knowledge and did not specialize except in the sense of putting more effort on the lines of higher unit value.

The company found it necessary, in 1926, to increase its rate of stock-turn in order to insure a reasonable profit. During the detailed examination which it made of each line at that time, the company discovered that its investment in machine-cut files and in Swiss pattern files was much too large. It carried two competing lines of each of these types of files, but the machine-cut type of file did not compete directly with the Swiss pattern, or hand-cut, type. Both lines of machine-cut files were made by the Ames Company, the better grade selling under the brand name "Ames," and the second grade selling under the name "Dewey." The "Ames" line was sold at prices from 35% to 40% higher than those for the second grade, a spread in prices which was supposed to compensate for differences in quality; but the general manager of the Richwell Supply Company stated that in his opinion there was little actual difference in quality. The Ames Company also made one of the lines of Swiss pattern files, and this line was sold under the Ames name. The other line of Swiss pattern files was known as the "National." The Ames Company advertised its brands extensively in national media, both trade and general. The National File Company did no magazine advertising.

The Richwell Supply Company carried less than half the items in the full lines of the two brands of Swiss pattern files, but its stocks were practically complete for the main items in those lines. The main items included: hand, pillar, narrow pillar, extra narrow pillar, half round, slim half round, crossing, knife, warding, equalizing, barrette, cant, pippin, crochet, round, square, three square, metal saw, slitting, rounding-off, checkering, fork, and parallel round files. Each of these types of files was carried in from six to ten lengths and in from two to seven cuts. The general manager of the company was of the opinion that a wide variety of Swiss pattern files was required for work on dies. An analysis of the company's sales of pillar files for the years 1927 and 1928, however, indicated that the demand was by no means uniform for all sizes and cuts.



The company stocked the full lines of the Ames and Dewey machine-cut files. The principal types of files in those lines were: mill, mill 1 round end, mill 2 round ends, mill blunt, taper, hand saw blunt, slim taper, bandsaw, double ender, pit saw, cant, flat, hand, pillar, square, three square, half round, round, warding, knife, and utility.

In pursuance of its policy of inventory reduction, the Richwell Supply Company sought permission of the National File Company, with which it had an exclusive agency agreement, to return about \$1,600 worth of slow-selling files to be credited against future purchases. To this request the National File Company willingly acceded. The Richwell Supply Company then asked the Ames Company, which was selling to 4 of the 12 or 13 other supply firms in the city in which the Richwell Supply Company was located, to accept a similar amount of slow-selling stock. This request, however, was refused. This failure of the manufacturer to cooperate, combined with the fact that its gross margin on Ames files had become unsatisfactory with increasing price competition, led the Richwell Supply Company to discontinue the three lines of the Ames Company. The manager of the Richwell Supply Company also concluded that competing lines of the two types of files represented useless duplication of stocks, because in his opinion few buyers had strong brand preferences. In Exhibit 1 are given in approximate figures, for the year 1926, the sales volume of each of the four lines of files, the average inventory, the number of items in a full line, and the number of items carried by the Richwell Supply Company. In Exhibit 2 are shown the discounts allowed on the lines and the gross margins obtained. The gross margins obtained on the Ames lines were excessively low; price cutting had been resorted to in order to secure the business of those industrial companies which bought in large quantities. Purchases of such companies amounted to about 70% of the Richwell Supply Company's total sales of files.

After discontinuance of the Ames lines, it was necessary for the Richwell Supply Company to add at least one line of machine-cut files. There were three brands of machine-cut files which it was possible for the company to add. Two of them were advertised nationally and were well-known by practically all purchasers. For neither of these lines, however, could the company secure an exclusive agency. The manufacturer of the third brand, the

EXHIBIT 1

SALES, INVENTORIES, AND NUMBER OF ITEMS, FOR SPECIFIED LINES OF FILES SOLD BY THE RICHWELL SUPPLY COMPANY (APPROXIMATE FIGURES—1926)

Brand of File	Sales	Average Inventory	Number of Items in Full Line	Number of Items Carried by Company
Ames (machine-cut).....	\$3,500	\$2,250	700	700
Dewey (machine-cut)....	3,500	2,000	700	700
Ames (Swiss pattern)....	3,000	5,000	3,000	1,200
National (Swiss pattern) .	6,500	5,000	3,000	1,200

EXHIBIT 2

DISCOUNTS AND GROSS MARGINS FOR SPECIFIED LINES OF FILES SOLD BY THE RICHWELL SUPPLY COMPANY

Brand of File	Discount Received From List Price by Company	Manufacturer's Suggested Resale Discount	Company's Gross Margin When List Prices Were Observed	Actual Gross Margin on 70% of Sales
		(Percentages)		
Ames (machine-cut).....	50/10/2½	40/10	19	7.4 or less
Dewey (machine-cut)....	70/10	60/10	25	8.5 or less
Ames (Swiss pattern)....	20/10/2½	10	22	12 or less
National (Swiss pattern) .	25/10	10	25	25

“Ruddy” file, regularly granted exclusive territories to distributors. This fact led the Richwell Supply Company to favor the Ruddy brand, although that line was not advertised nationally and was not known widely in the territory served by the company. After making tests of the durability and effectiveness of the three brands of files, which revealed the decided superiority of the Ruddy products, the company decided to accept the exclusive agency for that line. The company also decided that it was unnecessary to add more than one line.

Most manufacturers of files, in the company's experience, expected their distributors to carry a complete assortment of sizes and cuts. The Ruddy Company, on the other hand, made a distinction between “regular” items and “special” items and did not expect its distributors to stock the special items. List

prices, which were the resale prices that the manufacturers anticipated their distributors would follow, were higher for the Ruddy line than for any of the four other lines. The discounts from list prices that were given distributors, however, were substantially the same for all the lines. For the Ruddy line and the two nationally advertised lines, the discount was approximately 60% from list. This discount was in comparison with the 50% and 10% and 2½% allowed on the Ames brand and with the 70% and 10% allowed on the Dewey brand.

The Richwell Supply Company purchased a complete line of Ruddy files, involving about \$2,000 worth of stock, in the latter part of 1927. On this line the Richwell Supply Company gave a 45% discount to those large industrial customers who purchased in unbroken lots of a dozen or more, and a 30% discount to other industrial companies. About 70% of the company's volume of sales of this line was secured at the 45% discount, which represented a gross margin of approximately 27%.

The company's sales of Ruddy files in the first quarter of 1928 were twice as large as its combined sales of the Ames and the Dewey machine-cut files had been for the corresponding period of 1927; the increase in gross profit was proportionately even greater than the increase in sales, because of the larger gross margin percentage. The difference in sales volume, according to the general manager of the Richwell Supply Company, represented the difference between carrying a highly competitive line, the small gross margin on which warranted no real solicitation of orders, and promoting a line on an exclusive agency basis with the assurance of a satisfactory gross margin. In addition, the fact that Ruddy files by careful testing proved clearly to be superior in quality to competing files furnished the Richwell salesmen with a strong sales argument.

**COMMENTARY:** The great variety of items and the duplication of items, many of which were called for infrequently, resulted in a low rate of stock-turn for files in the Richwell Supply Company's business. On numerous items in the Ames and Dewey lines, where the rate of stock-turn was not over once a year, the supply firm's gross margin was barely large enough to cover the carrying charges and left little for meeting other costs of doing business. This clearly was a situation in which simplification of the firm's stocks was in order.



The fact that the Richwell Supply Company found by testing that Ruddy files were superior in quality to competing files also was a strong factor in favor of its decision to replace Ames and Dewey files by the Ruddy brand. Files are an item bought on rational buying motives, with appreciation of quality by the users. Hence, without discounting the existence of brand preference among purchasers of files, the company had excellent grounds on which to promote the sale of Ruddy files. With lower expenses, as a result of higher carrying charges, and with a better product, the Richwell Supply Company was in a better position to meet price competition from other lines after replacing the Ames and Dewey brands by the Ruddy line.

From the manufacturer's standpoint the prevalence of price cutting, in the absence of predatory sellers, constitutes evidence of uneconomical distribution and, in this case, leads to the conclusion that the Ames Company was striving to force its full line through too many channels of distribution in a single market. From the dealer's standpoint the advertising of the Ames Company was not of sufficient advantage to offset the ill effects of too intensive distribution. It appears, therefore, that the Ames Company's merchandising and distribution policies had not kept pace with its advertising.

May, 1930

M. T. C.

## COVENT, SMITH & COMPANY<sup>1</sup>

### MANUFACTURER—SMALL HARDWARE

**MERCHANDISING—***Plan Adopted for Controlling Additions to Line.* A company manufacturing a large number of small hardware items had relied on salesmen's suggestions for adding new items to its line. When an analysis of sales and costs over a two-year period revealed a loss on a substantial percentage of items, the company undertook to improve the control of additions to its line. A product suggestion form was developed for salesmen's use in recommending new items. Use of this form, copies of which were referred to the production, cost, and sales departments before final decision on a recommendation was made by the sales manager, resulted in a more careful selection of new items.

(1927)

Covent, Smith & Company, with annual sales of approximately \$3,000,000, manufactured automobile, saddlery, and other types of small hardware. In the company's line there were more than 40,000 items if all differences in sizes and finishes were counted. If sizes and finishes were not taken into consideration, there were more than 3,000 separate items. New items were added at the rate of about one a week. In 1927 the company undertook to improve its control of addition to its line.

With the exception of shoe buckles, which it sold to shoe findings wholesalers, the company made all its sales directly to manufacturers that used its goods in their products. In some instances those manufacturers served also in a wholesale capacity, reselling the hardware items to retailers or others.

Covent, Smith & Company maintained branch offices in five cities in the United States. The firm had 12 salesmen. These salesmen called upon companies located in the larger cities. The salesmen called upon actual and prospective customers in those cities once in 30 to 60 days. Lists of potential customers were compiled at the central office and furnished to the salesmen. All the salesmen were brought to the factory for consultation and instruction at least twice a year. In territories other than those

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<sup>1</sup> Fictitious name.

covered by its salesmen, the company sold directly by mail through correspondence and advertising.

The company's market was to some extent a shifting one and, to maintain the sales volume and make economical use of production facilities, it was necessary to add new items frequently and to discontinue others. The salesmen were instructed to be on the lookout for suggestions as to new items to manufacture and to report those items for consideration by the company. Prior to 1927 the company commonly had added to its line whatever items were recommended by the salesmen unless those items clearly were unsuitable. A record which the company drew up, giving sales and cost, for the items which had been added in a two-year period, showed that on a substantial proportion of these items a loss had been experienced.

To provide greater control over product additions, the company developed a Product Suggestion form, shown here as Exhibit 1, for use by its salesmen in recommending items to be added to the line. Each morning the new product suggestions received were sent to the production officials. Those officials passed upon the suggestions from the point of view of the suitability of the products for manufacture in the company's plant.

All suggestions passed by the production officials then were sent to the cost department. That department figured the cost of the additional tools required for making the suggested products and also the total unit production costs of the products.

The forms with these data upon them then were sent to the sales officials. Authorizations for production were made by the general sales manager. In deciding whether or not to authorize production of an item, the general sales manager took into consideration the probable volume of sales at the price that would have to be asked to cover costs and allow a fair profit, and also the suitability of the item for distribution by the company's marketing organization. It had been suggested, for instance, that the company should manufacture a special type of pencil sharpener. Although the company was equipped to produce this product, the sales manager did not authorize its manufacture in view of the fact that the company was not prepared to market it.

To assist him in estimating probable sales volume of products suggested for manufacture, the sales manager asked for estimates from the various salesmen. Customarily, unless a majority of the



salesmen were optimistic about sales of an item, the sales manager did not approve its manufacture. The sales manager stated that the salesmen tended to favor the addition of new items and to oppose the discontinuance of existing items.

PRODUCT SUGGESTION

Description of Product Suggested				Date			
Suggested by							
Authorized by				Date			
SALES DEPT. ORDER NO.							
Size		Finish					
ARTICLE							
No.		Name		Selling Price			
				Year		Year	
Estimated		Actual		Stock	Sales	Stock	Sales
TOOL COST							
		Jan.					
		Feb.					
Estimated		Actual					
PRODUCT COST		Mar.					
		Apr.					
		May					
		June					
		July					
		Aug.					
		Sept.					
		Oct.					
		Nov.					
		Dec.					

Exhibit 1: Product suggestion form used by Covent, Smith & Company.

On the product suggestion form adopted, space was provided for a two-year monthly record of stocks and sales of the product suggested. This record was kept for each new item whose manufacture was authorized by the general sales manager. This enabled the company to follow closely the sale progress of the item.

When an item was added to the company's line, each salesman was sent a sample and a bulletin describing the uses and merits of the item and stating its price. Prior to 1927 the company had made no follow-up of new products. After that time, however, it watched the sales volume and called the salesmen's attention to new products which appeared to need special sales effort. Each

salesman was expected to be familiar with all the company's products. However, customers for many of the various products were concentrated geographically so that only the salesmen for those areas actually were called upon to sell them. The general sales manager was of the opinion that the time required for showing new products did not interfere with sales of established products. The salesmen were allowed drawing accounts and were paid commissions on sales in excess of specified quantities.

Not only did the product suggestion form enable the company to follow the sales of new products, but it also tended to make the salesmen give greater thought to the items that they suggested. The name of the salesman suggesting a new item was recorded on the form for that item, and if the product failed to make satisfactory sales progress this fact was called to the salesman's attention, although he, of course, was not held fully responsible for the failure.

COMMENTARY: The "product suggestion form" adopted by Covent, Smith & Company constituted a step forward in merchandising by the company. The previous method, whereby additions to the line had been governed largely by salesmen's recommendations, was not sufficiently discriminating. With the "product suggestion form," however, each item recommended was passed upon by the production department and the cost department as well as by the sales department. The record of two years' sales provided for on the form was a particularly commendable feature, since it served continually as a check on the exuberance of the salesmen. It was desirable, of course, to encourage salesmen to send in suggestions regarding new products and to have the salesmen enthusiastic over the sales possibilities of new items added to the line. Nevertheless, the decision regarding the addition of new product items and the elimination of poor sellers is the chief function in merchandising and calls for thoroughly judicious consideration, with careful preliminary analyses and careful checking of results. That task few salesmen are qualified to perform.

November, 1928

M. T. C.

## MALLOCK GRINDING MACHINE COMPANY

### MANUFACTURER—GRINDING MACHINES

**MERCHANDISING ORGANIZATION—***Establishment of Merchandising Unit in Sales Department.* A company manufacturing grinding machines developed, in its sales department, a unit charged with the studying of customers' special requirements, the adaptation of machines and attachments to meet these requirements, and the setting of prices.

**SALES ORGANIZATION—***Division into Units According to Types of Work Done.* A company manufacturing grinding machines decided that the increasing number of requests from customers for special machines and attachments made necessary a division of the company's sales organization into the following units:

Unit 1 with duties of recommending how to use machines and what special attachments were needed; and of setting prices.

Unit 2 with duties of handling and interpreting customers' orders.

Unit 3 with duties of servicing and demonstrating machines.

Unit 4 with duties of selecting forms and preparing price lists.

**SALES ORGANIZATION—***Transfer of Engineering Personnel from Factory Division to Sales Division.* A company manufacturing grinding machines found that much of the work done by its factory engineering personnel was directly connected with adapting the company's products to the special uses of customers. The company decided, therefore, to transfer to an appropriate unit in the sales department, the engineering personnel whose work was chiefly of a selling rather than a production type.

(1927-1928)

The Mallock Grinding Machine Company, with annual sales of several million dollars, manufactured a high-grade line of grinding machines. In 1927 the company revised the set-up of its internal sales organization, partly to provide for a redivision of tasks between the production and sales departments; this redivision was made necessary by the increasing amount of technical and engineering work involved in selling.

In 1928 a further change was proposed, namely, that the sales department unit, which was responsible among other duties for adapting machines to customers' special requirements, be strengthened by the addition to that unit of engineers who previously had worked in the factory division of the company. If this



change were made, the company's engineering personnel would be divided between the sales and factory organizations, instead of being concentrated under the direction of the works manager, but the task of studying customers' special technical and engineering needs would be centralized in one unit of the sales department. The engineering force engaged in this work with customers, under the proposed plan, would be responsible to the general sales manager rather than to the works manager. This proposal finally was adopted.

Sixty-four per cent of the number of machines that the company sold in 1927 were sold in the United States by its own salesmen,  $32\frac{1}{2}\%$  were sold by foreign representatives, and  $1\frac{1}{2}\%$  were sold by domestic machinery dealers. The company maintained seven branch sales offices, in the chief industrial cities in the United States. At each of these branches there were one or two salesmen, one of whom served as the branch manager, and a demonstrator. Machinery dealers were utilized only in outlying areas where the potential sales volume of Mallock machines was small. The company deemed its products, because of their technicalities, unsuited for sale by dealers. The company was represented by 16 dealers most of whom had exclusive sales territories. The company supplied each dealer with price lists and with a sales manual, giving detailed information as to the machines. The company permitted no variations in its prices for standard equipment. Mallock salesmen, when necessary, assisted the dealers in consummating sales. The dealers were paid commissions on sales. The company's salesmen were paid salaries with small commissions.

Mallock machines were sold for from \$2,000 to \$15,000 each. They were largely protected by patents and the company continually was making improvements in them. Competition was keen, and experience had taught the company that its sales volume depended very largely upon its engineering ingenuity in adapting its products to the needs of users. During the few years prior to 1927 the company's sales had increased rapidly, and the company attributed this in large part to its production engineering and sales engineering services.

Mallock machines were basically standard. Each type of work for which the machines were used, however, required special attachments for holding the materials to be worked upon, and for

different uses special adaptations were required in the machines. By 1928, almost every machine sold had some distinctive and special features, although at one time a large proportion of the machines sold had been completely standard. The planning and developing of the special applications required collaboration between the company's engineers and production officials in customers' organizations.

The number of potential customers for Mallock machines was comparatively small. The company had only 1,500 to 2,000 firms on its list to receive direct mail literature. In an analysis in which the company classified its prospective customers in four groups—good, fair, poor, and very poor—only 170 firms were placed in the first group. Each of these firms, however, was an actual or potential user of a large number of Mallock machines. Among the users of Mallock machines were automobile manufacturers, steam shovel manufacturers, manufacturers of textile machinery, manufacturers of coal mining machinery, machine tool manufacturers, manufacturers of electric refrigerators and other electrical goods, and surveying instrument manufacturers.

The company did some advertising in trade papers, more to keep its name before users than to obtain inquiries. Beginning in January, 1928, the company sent one piece of direct mail literature weekly to each name on its mailing list. This direct mail literature consisted of descriptions of the actual performance of Mallock machines in users' plants. In the company's organization, the advertising manager was responsible to the general sales manager.

Salesmen of the Mallock Grinding Machine Company were men with engineering background and experience. It was necessary for them to understand not only the construction and operation of the company's machines but also how they could be applied to various types of work. Mallock machines competed not only with other makes of grinding machines but also with other methods of manufacture. The salesmen were responsible to the branch managers, who in turn reported to the general sales manager.

In addition to its salesmen, the company had a force of demonstrators and service men. In almost all instances the machines sold required demonstration. The cost of demonstration was included in the sales prices of the machines.

With the growing individualization of the machines and the increased attention paid to the special requirements of each customer, marketing of the machines had become more and more an engineering enterprise. By 1928 one out of every ten Mallock employees was directly associated with engineering work. Originally all the engineering work had been looked upon as a function of the factory division. And when sales engineering work became necessary that work also was performed by the engineering department under the direction of the works manager. As more and more technical and engineering work was required directly in connection with sales, however, a revision in the division of tasks between the sales and factory departments appeared necessary. The revised sales organization set-up that was in effect in 1928 was designed to allow for such changes. Furthermore, overhead costs had increased greatly with the increased sales engineering work, and the new set-up was expected to provide an efficiency that would tend to keep overhead costs as low as possible.

Under the organization set-up introduced in 1927, the company's sales department, known as the sales engineering department, was divided into four units, each under a head responsible to an official known as the sales engineer, who in turn reported to the general sales manager.

Unit 1, primarily an engineering unit, was concerned with making recommendations to customers and prospective customers as to types of machines to use and as to special attachments. Inquiries from prospective customers and samples which they submitted of the work to be done were referred to this unit, and the unit then worked out proposals to be made to the prospective customers. After the division made in the engineering department early in 1928, that part of the engineering force that was engaged in sales engineering work, such as designing special attachments for instance, became part of Unit 1. This arrangement was proving more satisfactory than the old. Under the old arrangement, when the entire engineering department was responsible to the works manager, the department's interest tended to be focused on production problems. With the sales department in control of its own engineering force, specialization was possible and more adequate attention was given the engineering problems involved in selling. The engineering department responsible to the works manager confined itself to problems connected with



the production of standard machines and with the development of improved designs.

Unit 1, in addition to working out the technical problems involved in sales proposals, also, for special parts, figured the costs and set the selling prices. On parts unlike any which previously had been made, and for which, consequently, no production cost records were available, the factory was permitted to set the time limits to be used in figuring costs. This was allowed not only because the factory was in a position to make accurate estimates, but also because it was thought that if the factory set the time limits it would have more interest in meeting them than it would if they were set by the sales department. When similar parts had been produced previously, the actual production costs for those parts, as shown by the company's records, were used in figuring selling prices. Unit 1 also was responsible for making the final tests of machines, particularly of special attachments, prior to shipment. This task was given to the sales department rather than to the factory both because the sales department designed the special equipment and because that department was immediately responsible to customers. All machines of course were subject to regular factory inspection prior to the final tests made by the sales department.

Unit 2 of the sales engineering department might be said to serve as an intermediary between customers and the various divisions of the sales and factory departments. All orders from customers were directed through that unit and then distributed internally to the various other units of the sales engineering department or to departments in the factory. Unit 2 was charged with the interpretation of customers' orders to the factory and engineering officials. Any questions raised by any of the units or departments respecting the orders received were referred to Unit 2, to be taken up with the customers directly or through the branch offices. All correspondence from customers, regardless of what units it might be referred to later, was handled originally by Unit 2; and likewise all correspondence directed by any department of the company to customers was handled by that unit.

Unit 3 was primarily a division for demonstrating and servicing machines. Almost all the machines that the company sold were demonstrated to the purchasers at their plants, and instruction was given to purchasers' employees as to the operation of the

machines. No separate charge was made for demonstration. If within a reasonable time after sale of a machine the customer asked for a service man, the servicing was done at the company's expense. Otherwise the customer was asked to pay a nominal charge per day and the expenses of the service man. Unit 3 also was in charge of the sample grinding department that the company maintained. This department was for the purpose of conducting experiments for actual and potential customers who wished to ascertain whether various types of work could be performed effectively on grinding machines. In addition, production estimates for machines sold were made by Unit 3. It was the company's theory that such estimates should be made by the department that was charged with demonstration of the machines. Otherwise, if the estimates were made by the factory or by some other unit in the sales engineering department, the demonstrators might feel that they were being asked to hold the machines to impossible or unfair production standards. The company, however, did permit its branch managers, who were practical engineers, to set their own production estimates when they wished to do so. This was allowed because of the differences in conditions in the plants of various customers. Some firms, certain of the automobile manufacturing companies, for example, required the highest possible rates of production from their equipment, whereas other firms were satisfied with a lower rate. Branch managers were in a position to know the plant practices of firms in their territories and sometimes wished to take those practices into consideration in making production estimates. A majority of the production estimates, however, were made at the central office by Unit 3.

Unit 4 of the sales engineering department was charged with such internal work as the selection of standard forms and the preparation of price lists. It also arranged contracts with dealers and handled customers' complaints.

During the period that this organization set-up had been in effect, the company deemed its operation satisfactory.

COMMENTARY: The plan of marketing organization evolved by the Mallock Grinding Machine Company is significant because in several of its major features it exemplified particularly progressive practice. The company's salesmen were responsible to district managers who in turn were responsible to the general sales manager. The

advertising manager also was responsible to the general sales manager. In those arrangements the plan was of an ordinary type. The particularly significant features were in the organization of the sales engineering service and of other units in the home office.

Unit 1 was the merchandising department of the organization, and in deciding to separate sales engineering from production-engineering, establishing what amounted to a specialized merchandising department, the company was pursuing the same course that several other manufacturers have adopted with success in recent years. The decision of the company that Unit 1 should price the products also was in accord with good practice.

The differentiation between Unit 1 and Unit 2 is noteworthy, because in some other instances manufacturers have placed their merchandising departments in charge of the routine work of order handling, with unsatisfactory results. The differentiation exemplified in this case is proving to be the better practice. It prevents the hampering of the creative work of merchandising by a constant pressure of routine details.

November, 1928

M. T. C.



## HAMERTON COMPANY<sup>1</sup>

### MANUFACTURER—INSTRUMENTS FOR MEASURING ELECTRICITY

MARKET SELECTION—*Market Analysis to Determine Major Markets.* A company manufacturing electrical measuring instruments decided in 1914 to make a systematic analysis of its market possibilities. All types of actual and potential purchasers and users of the products were classified and their special requirements investigated. The various classes of potential customers then were evaluated in terms of relative importance from a sales point of view. On the basis of this ranking, the company decided to concentrate sales efforts upon 16 of its 74 potential markets.

(1914-1928)

Prior to 1914 the Hamerton Company had made no systematic study of its markets. At that time, however, the company decided to analyze its markets with a view to directing its sales efforts more effectively.

Products of the company consisted of instruments for measuring electricity. Hamerton instruments were of an indicating rather than of a recording type. Among them were ammeters, milliammeters, voltmeters, electrolysis volt-ammeters, electrolysis volt-millivoltmeters, frequency meters, galvanometers, ground detectors, microammeters, microfaradimeters, wattmeters, thermoammeters, transformers, and tachometers. There were 300 active models of Hamerton instruments, and most models were made in hundreds of variations.

Hamerton instruments were employed in a wide variety of industries. Use of such instruments assisted in keeping electrical equipment in proper working order and in keeping operating and maintenance expenses at a minimum. The instruments were used for testing motors to assure proper loading; for measuring efficiency of motors; for determining the amount of power required to drive new machinery; for testing lighting systems to see that lamps were burning at their rated voltage; for testing new electrical equipment to ascertain whether it met specifications; and for numerous other purposes. In central power stations and wherever

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<sup>1</sup> Fictitious name.

there were switchboards, Hamerton instruments could be used. Manufacturers of various products, automobiles for example, incorporated electrical measuring instruments in those products. Battery service stations and automobile repair shops needing to test batteries could make use of Hamerton instruments. They were needed in laboratories. In fact, almost anywhere that electricity was used, measuring instruments could be employed to advantage. In general, Hamerton instruments were used in one of four ways; on switchboards; as fabricating parts to be incorporated in the products of purchasers; as production or operating equipment; or as laboratory equipment or testing equipment for individual consumers.

Prices of Hamerton instruments ranged from \$1 each to \$400 each. The average price per instrument sold was approximately \$15.

The Hamerton Company had been one of the first to develop electrical measuring instruments. Almost all types of its instruments had been patented. For many years the demand for such instruments had been so great in comparison with the supply that the company's marketing problem had been for the most part simply one of filling orders. Later, as patents expired and additional firms began the manufacture of instruments of similar types, it became necessary to exert more sales effort.

For some years the company in general followed a policy of soliciting orders, in so far as it was able, from all potential customers and made no organized attempt to direct its sales efforts toward the markets and customers that could be expected to yield the most favorable results. In 1914, however, the company decided to define and limit its markets.

The company's domestic sales were made by means of sales branches and a few agents, located in the chief cities in the United States. Some of the agents sold the Hamerton line only; others sold one or two additional lines. Each branch or agent had from one to five salesmen. In 1914 the company itself had about 35 salesmen. All the salesmen, as well as the agents, were paid on a commission basis. The commissions ranged from 6% to 10% of sales, averaging about 9%. In a large proportion of cases sales were made directly to users. Certain items, however, such as instruments for use by garages and individual consumers were sold through selected electrical wholesalers. In general all the sales-

men, with the exception of those located at the company's main office, sold the full line. At the main office there was some segregation of salesmen by types of industries. Hamerton instruments were technical in character and all the salesmen were engineers. An executive of the company stated that almost always the first two or three calls of a salesman upon a prospective customer were of a missionary character; it was necessary to explain the nature and uses of the instruments to the possible purchaser. The company whenever possible entered into yearly contracts with customers requiring large quantities of its instruments.

The company's first step in directing its sales efforts was to discover and classify all the types of purchasers and users of its products. There were found to be 74 of these. For each of these 74 the company then made whatever investigation was needed to determine the specific uses to which its instruments could be put by that class of purchasers and the particular kinds of instruments required.

After having listed and analyzed the markets for its products, the company then evaluated them in terms of their relative importance from a sales point of view. This evaluation, based on the company's sales records and on reports of salesmen and estimates of probable future sales, convinced the company that 16 of the 74 types of purchasers were of major significance and that sales efforts consequently should be primarily directed to those markets. The company recognized that new markets might arise, inasmuch as the electrical industry was a developing one, and that the 16 markets selected as the leading ones in 1914 might become relatively less important. The company's experience bore out this conclusion. For instance, sales to the automotive industry, one of the 16 important markets, in the period from about 1920 to 1928 declined from 25% of the company's total business to about 1%. From 1900 to 1907 or 1908 department stores and theaters in many instances operated their own electric plants and constituted an important market for Hamerton instruments. With the growth of central stations, this market disappeared. In 1926 about 20% of the company's total sales were of instruments used by individuals owning radio sets, a relatively new market. After that time people became less interested in building and servicing their own sets, and this market for such equipment



declined to about 3% of the total, while a new market developed among radio dealers and others servicing radios.

Until 1914 the company, except for referring inquiries to them, had given little direct assistance to its salesmen or agents. After analyzing its markets in 1914, however, the company prepared for the use of its salesmen and agents a sales book in which each of the 74 markets was listed alphabetically and its requirements and characteristic problems, in so far as they related to use of electrical measuring instruments, were described. This book served to make the salesmen and agents aware of market possibilities and to crystallize in their minds the distinctive characteristics and requirements of each market. It also placed them in a position to be of more positive service to customers.

It was upon the 16 major markets that the company wished its salesmen to focus their attention, however. With this in view, the company prepared for each of those markets lists of prospective customers. The preparation of these lists raised the question as to whether all the potential customers in each of the markets should be included or whether some limits should be set. The company decided upon the latter course.

One of the 16 major markets consisted of manufacturers of switchboards. There were comparatively few of those manufacturers, not more than 25 to 50, and all of them were large users of electrical measuring instruments. Consequently, they all were included on the lists of prospective customers whose patronage was to be actively solicited.

Another important market was made up of schools and universities that used electrical measuring instruments in laboratory work. The United States Bureau of Education rated the schools as A, B, and C. Schools in the A and B classes ordinarily had laboratories, whereas C schools did not. The company therefore included A and B schools on its prospect lists but excluded C schools.

Another important market included central power stations. In this market the company decided to solicit orders only from stations serving 3,000 or more customers. Stations serving less than this number of customers, that is, stations in towns of 15,000 population or less, would not be visited by Hamerton salesmen. The possible volume of orders to be obtained from such stations

was not deemed sufficient to justify the expense of sales solicitation.

One of the company's other important markets consisted of industrial plants using electrical measuring instruments as production equipment. Here the company decided to limit its market to firms having 100 or more employees; business of smaller firms would not be solicited systematically. The company's experience and special investigations which it conducted indicated that companies with fewer employees made little use of electrical measuring instruments.

As far as automobile manufacturers, radio manufacturers, and other manufacturers using electrical measuring instruments for fabricating parts were concerned, all prospective customers were to be solicited. Even very small firms of this type would require, over a period, a large number of instruments.

In this way the company for each of its major markets established limits to the firms to be visited by its salesmen. Lists of prospective customers in the various territories then were compiled and given to the salesmen. There were between 50,000 and 60,000 prospective customers in the 16 major markets. The company decided to keep records of sales separately for each of the 16 major markets, but to group sales for all the other markets.

In addition to assisting its salesmen by providing them with the sales manuals and with lists of prospective customers, the company provided them with literature concerning its instruments and their operation. It also prepared and distributed both to customers and to salesmen monographs on technical matters relating to the use of its instruments. One such 94-page monograph, for instance, was entitled *Principles of Permanent Magnet Movable Coil and Movable Iron Types of Instruments*, and another 150-page pamphlet was entitled *Electrical Measurements and Meter Testing in the Power Station*.

The company also advertised in trade papers reaching its major markets. As a result of its analysis of its markets, the company changed the type of appeal used in its advertisements. The advertisements formerly used had described Hamerton instruments and stressed their quality. This was changed and the advertisements were used as a means of giving helpful information to users.

The company, furthermore, in order to assist its salesmen, decided to have several men, working as assistants to the president, visit the salesmen once or twice each year to inform them of new developments, to advise them on specific problems, and to study their records to determine, for instance, whether sales of certain lines were being neglected or whether sales effort was being wasted on unprofitable customers. In addition, the company held yearly conventions for its salesmen and maintained an engineering staff at the main office that could be called upon by the salesmen.

Shortly after the company put into effect its plan of market determination and sales direction, the influence of the World War was felt and sales increased with great rapidity. Then, after the war ended, came the general depression and sales decreased. However, during the period from the beginning of the abnormal increase in sales to the lowest point reached in the depression, 1915 to 1923 in the case of the Hamerton Company, the company experienced a net gain in sales greater than the total increase of the previous 25 years; in that 8-year period sales of the company doubled. In the next two years, 1923 and 1924, sales almost doubled again. After 1924 sales continued to increase rapidly until 1927, when the increase became more gradual. The company attributed its sales progress in large part to the care which it continually exercised in selecting its markets. From 1914 to 1928, when the company's sales were increasing 400%, the company's salesforce was increased only about 70%. In that period the company's sales expense was reduced from 19.5% to 14.5%.

The company had been able to increase its sales and to decrease its selling expense in spite of a decided trend toward smaller orders. In 1928 the average unit order received amounted to \$80, whereas in 1914 the average unit order had been about twice that amount. In 1928 the company was filling 60% to 65% of the orders received from stock. Eighty per cent of the orders received were for quick delivery. About 20% of sales were made on contracts, and 75% of total sales were made in the 16 major markets.

**COMMENTARY:** The Hamerton Company pursued a logical course in systematically studying its markets and in utilizing the results of that study. This case shows the effects of the adoption of a plan often



discussed and seldom acted upon by business executives, namely, the restriction of sales efforts to major markets and major customers with disregard of minor markets and minor customers. The benefits of this procedure in the case of the Hamerton Company were demonstrated by a reduction in the ratio of sales expense to sales from 19.5% to 14.5% while sales were increasing 400%. This is a notable example of increasing sales without commensurate increase in selling expenses.

January, 1929

M. T. C.

## FAFNIR BEARING COMPANY

### MANUFACTURER—BALL BEARINGS

**MARKET SELECTION—*Diversification of Markets.*** A company manufacturing ball bearings had concentrated its sales efforts almost exclusively on the automobile industry and as a result was obliged to shut down its factory during the depression of 1920. To obtain a more diversified market the company increased its salesforce and its advertising appropriation, with the object of building up a larger market for ball bearings among manufacturers of tools, textile machinery, and blower systems by creating a demand for ball bearing equipped machines among users of the equipment.

**ADVERTISING—*Use to Secure Market Diversification.*** A company manufacturing ball bearings wished to build up a more diversified market for its products. To do this the company advertised, in trade papers and directly by mail, not only to purchasers of ball bearings but also to companies using machinery that might suitably be equipped with ball bearings. The appeals used were those of improved performance and resultant operating economies.

**SALES PROMOTION—*Missionary Campaign for Fabricating Parts.*** A company manufacturing ball bearings wished to secure greater market diversification. As one means of accomplishing this, the company employed salesmen to visit firms in several industries using machinery that might suitably be equipped with ball bearings. The salesmen sought to build up a demand for ball-bearing equipped machinery by inducing the firms visited to experiment with the use of ball bearings in their existing machinery.

(1923-1928)

Prior to about 1923 the Fafnir Bearing Company, a large manufacturer of high-grade ball bearings, had concentrated its sales efforts almost exclusively upon the automobile industry. That was practically the only large industry in which there was no sales resistance to ball bearings, and that industry absorbed by far the larger part of the ball bearings produced. In 1923, 65% of the Fafnir Bearing Company's sales were made to automobile manufacturers. As a result of the concentration of its sales in this one market, the company during the depression of 1920 and 1921 practically had had to shut down its factory.

Thereafter it was evident to the executives of the company that diversification of markets was imperative. As initial steps toward securing greater market diversification, the company decided to increase its salesforce and to improve and increase its advertising.

In 1923 the company had five salesmen. Two of these men devoted themselves entirely to the automobile industry and the other three travelled in large territories trying to cover all other industries. During the following 5 years, the company increased its salesforce to 22 men. In 1923 the company's advertising appropriation had amounted to  $1\frac{1}{4}\%$  of sales. By 1928 that appropriation had been increased to about  $3\frac{1}{2}\%$  of sales.

When the Fafnir Bearing Company decided to undertake to increase the proportion of its sales made in markets other than the automobile market, manufacturers of machine tools, manufacturers of textile machinery, and manufacturers of blower systems appeared to offer large potential fields for development. Ball bearings already were being used in a few applications in textile machinery and in machine tools, but, in the company's opinion, there were many other applications in which they could be used to real advantage. Plain bearings were being used in blowers but, through inquiries, the company learned that most users of blower systems experienced difficulty with burnt out bearings. Salesmen of the Fafnir Bearing Company visited manufacturers in these three industries and attempted to persuade them of the advantages which would result from use of ball bearings in their products. The manufacturers, however, were unwilling to increase their costs by using the more expensive type of bearings unless there was a demand from their customers for ball bearing equipped machines. This experience convinced the Fafnir Bearing Company that it would be useless to increase the sales or advertising pressure directed to the manufacturers of the equipment, at least until a demand had been created among users of the equipment. The company's task, therefore, became one of creating such a demand.

This was accomplished by inducing firms using the equipment to replace the bearings then in the equipment with ball bearings. An extensive campaign was carried on, for instance, among users of blower systems. The Fafnir Bearing Company developed and patented a type of ball bearing hanger box that readily could



be installed in a blower system in place of the existing bearings. The company instructed each of its salesmen to inquire at every factory he visited whether a blower system was being used and if so whether any trouble was experienced with burning out of bearings. If there was such trouble, and in a majority of cases there was, the salesman undertook to have the user install one of the Fafnir hanger boxes. These boxes were sold at a price that allowed the company a small profit. The customer was urged, if the ball bearings proved satisfactory, to specify ball bearings when purchasing additional blower equipment.

In addition to its own salesmen the company was represented by about 70 wholesale distributors. These distributors sold a line of bearings which the Fafnir Bearing Company had developed for use on line shafting in machine shops. The potential number of customers for these bearings was large and the typical unit purchase was small, so that the company could not afford to sell them directly to users. The distributors, as well as the Fafnir salesmen, undertook to induce users of blower systems to install the Fafnir bearing boxes.

It was estimated that Fafnir bearings were installed in the blower systems used in at least 1,000 plants. Within a year after this campaign was begun among users of blower systems the company began to find a market for its bearings among blower manufacturers. By 1928, one large blower manufacturer had standardized on Fafnir bearings and four other blower manufacturers were buying them in large quantities.

The company followed a similar policy in endeavoring to obtain a market for its bearings among manufacturers of textile machinery and machine tools. There it was able to demonstrate such substantial savings to users as to insure their specification of ball bearings in any additional machines which they purchased. Among other manufacturers which the company succeeded in interesting in the use of ball bearings in their products were those making electric motors, electric drills, gasoline and electric shovels, cranes and draglines, railway signal apparatus, cotton gins, factory trucks, tractors, printing presses, lawn mowers, polishing machinery, and wood working machinery. By 1928 the company was making 60% of its sales outside the automobile industry, although its automobile sales had grown steadily during the five-year period. The general sales manager estimated that in 1928

at least 75% of the ball bearings being produced in the United States were being purchased by the automobile industry.

Not only was the personal work which the company's salesmen and distributors carried on among equipment users of value in diversifying the company's market, but the company's advertising also was effective in achieving that end. In fact, except in instances of special campaigns such as that among users of blower systems, the burden of interesting machinery users in ball bearing equipped machinery was borne very largely by the advertising. In view of the large number of machinery users the company could not afford to have its salesmen visit them to do missionary work. Prior to about 1923, the company's advertising had been confined to a few trade papers and to direct mail literature sent to actual or potential buyers. The greater portion of this advertising, like the other sales efforts, had been directed to automobile manufacturers.

After it decided to undertake to diversify its markets, the Fafnir Bearing Company increased the number of trade papers in which it advertised and began circularizing a large number of users of machinery in which ball bearings might suitably be used. In its advertising, the company stressed not the intrinsic quality of its product but performance facts. For example, in a pamphlet which it prepared for distribution to users of spinning frames and twisters the company reported in detail a comparative test, made at a specified mill, of machines equipped with ball bearings and machines not so equipped. After describing the machinery tested and stating the date of the test and the names of the persons conducting the test, one of these reports went on as follows:

Babbitt Bearings	Ball Bearings	Savings with Ball Bearings	
H.P.	H.P.	H.P.	%
4.00 (3.00 kw.)	3.00 (2.25 kw.)	1.0 (.75 kw.)	25%

Translating this power saving and also the oil and labor saving into dollars and cents gives:

*Power Saving*

.75 kw.  $\times$  120 hrs. per week  $\times$  50 weeks  $\times$  \$0.014 per kw.-hr. = \$63 yearly power saving per frame.

*Oil Saving* (Fafnir Boxes are lubricated with a grease gun through force feed fittings.)

7 Babbitt $\times$ 100 oilings $\times$ $\frac{1}{100}$ gal. $\times$ \$0.40 per gal.	= \$2.80
7 Ball $\times$ 3 greasings $\times$ $\frac{1}{30}$ lb. $\times$ 0.15 per lb.	= .11
Yearly oil saving per frame	\$2.69

*Labor Saving*

7 Babbitt $\times$ 100 oilings $\times$ $\frac{1}{60}$ hr. $\times$ \$0.20 per hr.	= \$2.33
7 Ball $\times$ 3 greasings $\times$ $\frac{1}{30}$ hr. $\times$ 0.20 per hr.	= .14
Yearly labor saving per frame	\$2.19

*Summary*

Savings		Investment (Cost of Ball Bearings)	
Yearly saving in Power	\$63.00	7 Fafnir Spinning	
Yearly saving in Oil	2.69	Frame Boxes	\$56.50
Yearly saving in Labor	2.19		
Total savings per frame	<u>\$67.88</u>		<u>\$56.50</u>
Annual Return on Investment			
$\frac{67.88}{56.50} = 120\%$ Annual Return			

The ball bearings, therefore, pay for themselves in power, oil, and labor saving in about 10 months.

In its advertising to manufacturers of equipment in which ball bearings could be used, the Fafnir Bearing Company stressed the fact that use of ball bearings would supply them with a competitive sales advantage. In one of its bulletins to such manufacturers the company stated, for instance:

As a user of Fafnir ball bearings you have added an important talking point both for your salesforce and your advertising towards decreased sales resistance. Ball bearings, through the extensive advertising of the five or six leading manufacturers—the most extensive advertising on any type of anti-friction bearing—are synonymous in your prospects' minds with the utmost in efficiency and economy of operation. The advertising of the Fafnir Bearing Company in the leading trade and technical journals, some of which is reproduced inside, has informed operating executives all over the country of the particularly high quality and long life of Fafnir ball bearings.

It is, therefore, to your advantage to tell your prospects that you have adopted Fafnir ball bearings—or at the least, ball bearings. We have outlined for you separately the main advantages of ball bearings on your machines from the point of view of your customers and prospects. Giving publicity to these in your advertising and in your literature will add another reason in your customer's mind as to why your machines will give him the greatest satisfaction. One entire advertisement devoted to this subject will definitely impress it on your trade as an added feature of your product; putting it constantly before them to some extent in all your publicity will keep it in their minds.

To make this even easier for you we have illustrated on a following page appropriate cuts which we will furnish in various sizes free of charge. If you prefer not to mention Fafnir, we would recommend using one of the bearing cuts to make the reference to ball bearings in general more graphic; note that the standard bearing cuts do not carry our name—the wide inner ring bearing being exclusive with us, the name on the cut is immaterial.

Our advertising department will be glad to suggest ways in which our trade name or a bearing cut can best be incorporated in your own



advertising. Incidentally, in advertising the use of ball bearings in your machines it is of interest to your prospects and particularly graphic to occasionally display a drawing of your ball bearing mounting with some prominence.

In addition to your featuring Fafnir ball bearings in this way we would like to reciprocate by featuring your product in our publicity—both in our magazine advertising and in our house organ, *The Dragon*. The inside page shows examples of how this has been done with other customers, and we will gladly give you further details on request.

We believe that by thus taking advantage of Fafnir advertising your use of Fafnir ball bearings can become an important feature in helping you to sell your product. May we work with you to that end?

The company also had developed a house organ which it sent monthly to 20,000 persons. This paper was sent to no one upon whom Fafnir salesmen had not called. In many firms 10 to 15 individuals received the paper. Usually it was sent to plant superintendents, purchasing agents, engineers, and perhaps some of the executives. Most of the space in this publication was devoted to semi-technical articles dealing with actual applications of ball bearings. Descriptions of actual applications also served to advertise the machinery in which the bearings were used and hence served as an inducement to machinery manufacturers to use Fafnir bearings.

In addition to its salesmen, all of whom were trained in the factory and were thoroughly familiar with the design of Fafnir and competing bearings, the company in 1928 had four engineers located at strategic points for serving customers. These engineers were able to work out applications of bearings and to advise customers on technical questions arising in connection with the use of ball bearings. Salesmen or customers were free to call upon the services of these engineers. At one time the company had thought it advisable to employ engineers as salesmen. This plan had not proved successful, however. It was the company's experience that, in general, engineers did not make satisfactory salesmen. They were too much interested in the technical problems and too little interested in making sales. The company, therefore, had decided to use as salesmen men who were technically trained in its products but who were not engineers, and to supplement their services to customers with those of engineers who devoted their full time to the engineering work.

The company paid its salesmen minimum salaries and commissions on sales in excess of specified amounts. During periods

when the salesmen were doing a large amount of work among machinery users, special salary arrangements were made. By 1928 little of this work was being done. The salesmen spent about 20% of their time with customers; about 40% of their time with potential customers not using ball bearings; and about 40% of their time with potential customers using competing makes of bearings.

The company was satisfied with its program of market diversification. Its sales had increased greatly and it no longer was dependent upon a single industry. Sales to automobile manufacturers, moreover, usually were made in large quantities, but at a narrow gross margin. On sales to other industries the company's gross margin was substantially greater. However, the expense percentage for sales and engineering work involved in selling to industries other than the automobile industry was more than three times as large as the corresponding expense percentage for sales to that industry. The program of diversification also increased production costs by increasing the number of sizes and types of bearings that the company needed to make. In the five years from 1923 to 1928 the number of sizes and types of Fafnir bearings was increased from 300 to approximately 1,000.

In April, 1928, the company was making a survey of the paper mill industry to determine whether a campaign among users of paper mill machinery, such as that conducted among users of blower systems, was advisable. The manufacturers of the machinery had expressed their willingness to use ball bearings provided a demand for ball bearing equipped machinery developed among their customers. Now that the Fafnir Bearing Company had reasonably wide distribution, it did not wish to undertake aggressive missionary work in another market unless the probable sales volume appeared clearly to warrant it.

**COMMENTARY:** The major problem before the Fafnir Bearing Company in this case was the diversification of its market, for the purpose of securing greater stability of sales and earnings. In order to diversify its market, the company found it necessary to increase its advertising and sales promotion expenditures to a rate approximately three times as great as that incurred in selling to automobile manufacturers. The inertia encountered and the difficulties experienced in arousing the imagination of fabricators and users to the merits of using ball bearings compelled the company to conduct a broad educational program among

users, in order to influence fabricators. Thus the company's marketing expenses were increased, measured in percentage of sales. This increase in the expense ratio, however, was offset by the higher margins secured in the new markets; the users thus paid for their education. This does not imply an economic loss, nevertheless, for the users apparently were able to effect economies in their own operations which made it economical for them to purchase ball bearing equipment at the prices charged. Hence, even with the resulting higher marketing expenses, the diversification of markets was of advantage both to the Fafnir Bearing Company and to its new customers.

This case incidentally presents several other points of interest, which do not call for extended comment: the fact that the bearings were a type of fabricating part which lent itself to the effective utilization of advertising and sales promotion methods among users of the products in which it was incorporated; the advantages of publishing in such industrial advertising proof of economies made possible by the advertised goods; the merits of addressing sales messages to operating men in the plants of potential users; and the determination to employ men who were not engineers as salesmen. Those points were covered adequately, so far as this case is concerned, in the statement of the case itself. The case is of interest primarily in emphasizing the need for market diversification and in illustrating the reasons why educational marketing methods must be carried on.

November, 1928

M. T. C.



## WENDELL COMPANY<sup>1</sup>

### MANUFACTURER—AUTOMOTIVE EQUIPMENT

#### DISTRIBUTION CHANNELS—*Distributors Used in Preference to Direct Selling.*

A company manufacturing automotive equipment used by garages and service stations decided to discontinue its plan of direct sale, except in the case of companies operating large chains of filling stations, and to make use of wholesalers. The company's chief reason for using wholesalers was the fact that sales in any one locality were relatively small and the market was widely scattered. The company would assist the wholesalers with extensive trade-paper and direct-mail advertising.

#### MARKET COVERAGE—*Use of Plan of Selected Distribution.* In order to minimize price cutting and to obtain cooperation from wholesalers, a manufacturer of automotive equipment decided to use a plan of selected distribution rather than to seek dense distribution. Granting of exclusive sales territories was judged inadvisable on the ground that it would discourage aggressive sales efforts.

#### SALES ORGANIZATION—*Use of District Managers to Supervise and Assist Distributors.* When it adopted a plan of distribution through wholesalers, a company manufacturing automotive equipment decided to employ resident district managers. The chief duties of the managers were to obtain desirable distributors and to assist the distributors in their sales work. The managers commonly accompanied the wholesalers' salesmen on their sales visits.

(1924-1928)

The Wendell Company, which had been established in a large eastern city in 1914, manufactured several lines of automotive equipment used by garages and service stations. Its sales volume in 1927 was approximately \$1,250,000. Until 1924 the company had sold directly to users for the most part; some sales had been made by manufacturers' agents. In 1924, however, the company found it advisable to discontinue selling directly to most users of its products, to use automotive equipment wholesalers on a selected distribution basis, and to have district managers resident in branch territories.

The Wendell Company's first and main line was air compressors, which were used when first introduced chiefly for inflating

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<sup>1</sup> Fictitious name.

tires. Prices of Wendell compressors ranged from \$200 to \$500. At various times the company added new lines. During the period from 1924 to 1928 spray equipment and high-pressure hydraulic car washers were added.

The most important users of the Wendell Company's products were general service garages, automobile dealer service garages, gasoline filling stations, oil companies operating filling stations, and truck-fleet and bus garages. Every line which the company manufactured was sold in these markets. Other markets, for certain of the products, were automobile and furniture paint shops and tire shops.

Wholesalers at first had not been interested in carrying Wendell compressors; the demand for compressors had not been widely established and the Wendell Company was little known at that time. Most of the company's sales efforts had been exerted within a 500-mile radius of the city in which the company was located. More distant territories had been reached by mail, by manufacturers' agents, or by the sales manager and the one salesman who together constituted the company's salesforce prior to 1924.

In 1924 the Wendell Company employed a new sales manager. This man concluded that Wendell air compressors had become so widely known as to make feasible systematic distribution through wholesalers. The sales volume in most cities and towns, moreover, was deemed too small to warrant continuance of direct selling in competition with other manufacturers of similar automotive equipment who were selling chiefly through wholesalers. Direct selling, in the sales manager's opinion, could be used effectively only in the larger centers and in places relatively close to the company's plant. The sales manager considered wholesaler distribution necessary for reaching any substantial portion of the market. He described the company's existing method of covering the market as "spotty and haphazard." Potential customers were located in every section of the United States, from the largest cities to the smallest villages. In order to exploit the market thoroughly, therefore, the sales manager judged his first task to be the establishment of satisfactory distribution through automotive equipment wholesalers.

By 1928 the company was selling to approximately 300 wholesalers, or more than double the number to whom it had been selling at the beginning of 1924. Additional wholesalers were being

secured in 1928. Stocks of wholesalers ranged between \$600 each and \$3,000 each; they carried practically no competing lines.

The company's wholesaler distribution was considered "selected." The sales manager stated that his company's policy in this respect was contrary to the practices of most competitors, who sought dense distribution. Among the reasons for selling to selected wholesalers only rather than to as many wholesalers as possible was the likelihood of obtaining better cooperation and of minimizing price cutting by that policy. It had been the observation of the sales manager that no wholesaler actively promoted sales on competitive lines of merchandise unless given a selected or potentially exclusive distribution. The sales manager pointed out that, even under the most favorable conditions, wholesalers could not be relied upon for aggressive promotion to any great extent. Even though a wholesaler's salesman made it a special point to ask a garage about its air compressor or car washing requirements, most of his time necessarily was taken up with the other 800 or 900 items which the wholesaler carried. Besides, a wholesaler's salesman could not usually go out of his regular route, even to answer a special inquiry.

The sales manager did not believe it wise to give completely exclusive territories to wholesalers. He was of the opinion that an exclusive distributor, knowing that he had no competition in his territory and realizing that it was the consistent practice of the manufacturer to maintain exclusive sales territories, would not push the manufacturer's products aggressively. In many smaller cities and even in some large ones where there were as many as 25 or 30 automotive equipment wholesalers, the company had selected only one distributor. A few of the distributors were allowed exclusive territories by a "gentlemen's agreement"; but with most of them no such agreement existed.

The company experienced little difficulty in securing the most desirable distributors because, the sales manager explained, the company was a pioneer in its field; it manufactured high-grade equipment; it advertised extensively and successfully; and its products were recommended as the best equipment of their type in practically all the automobile dealer catalogs published by automobile manufacturers. In one western city with a population of 250,000, for instance, the company took away from its competitors the two best of the seven wholesalers selling auto-



motive equipment there; those two wholesalers, the sales manager estimated, obtained over 80% of the air compressor business in that city. In an eastern city of about 500,000 population the company also obtained the two best of the twenty wholesalers located there. The company did not use a price appeal in securing its distributors; it offered a 30% discount, which was stated to be the customary discount allowed on this type of equipment.

There was one type of user, however, to which the company continued to sell directly; that type was companies operating large chains of filling stations. About 20% of the Wendell Company's business was done with those companies. The annual purchases of each ranged between \$3,000 and \$10,000; they were granted a 30% discount on the published retail price, which was the same discount allowed wholesalers.

The company's advertising expense usually was about 4% or 4.5% of sales. Advertising was considered a highly important factor in the selling program. It was estimated that 80% of the sales made through wholesalers were really obtained through the mail by the Wendell Company itself; that is to say, the company was able to "close mentally" about four-fifths of its indirect business by replying to mail inquiries with descriptive literature and sales letters. The wholesalers were notified of inquiries and actually completed the transactions by delivery of the equipment and collection of bills. The company attributed part of its success in making sales by mail to the fact that garages and service stations had been waiting for products such as the company was producing. For instance, garages operating automobile laundries welcomed improved car washing equipment because it was obvious to most of them that with it they could do a better job, in less time, and at less expense.

The company advertised through the mail every month to thousands of potential customers. If the first three mailings to a new prospective customer failed to produce a reply, the advertising department sent him a letter asking if he preferred to be dropped from the mailing list. In this letter four other short questions were asked about air compressor requirements and one was asked about another type of equipment. About 90% of the prospective customers to whom letters of this type were sent answered them, and practically all the persons answering were interested in securing additional information.

In its advertising in automotive journals the company had made what it thought was an effective change in copy approach. Whereas prior to 1925 the quality and mechanical efficiency of the compressors had been advertised, after that time the copy featured the uses of compressors and attachments and also emphasized the increase in profits which could be obtained from greater service at lowered expense. Testimonials sometimes were used to support these statements.

Concurrent with the development of wholesaler distribution was the employment of district managers. In 1928 the company had eight managers in an equal number of territories, which covered the United States. The managers were placed in territories sometimes before distributors were obtained and sometimes afterwards. It was impossible to isolate the increased sales resulting from the work of these resident managers, but the sales manager considered them an especially important part of the company's distribution policy.

In an eastern territory where wholesaler distribution had already been developed, a district manager was placed at the beginning of 1926; sales through wholesalers in this territory increased 28% in 1926 and by about the same percentage in 1927. A substantial proportion of these gains was attributed to the efforts of the district manager; part of the gains were thought to result from a slight increase in the number of wholesalers and in the number of lines manufactured by the company. In a western territory a special agent who handled Wendell equipment alone and who sold directly to users was supplanted by a district manager in 1926. During that year, 16 wholesalers were obtained for that territory and the sales volume, not including equipment sold directly to companies operating chains of filling stations, increased almost 300%. A district manager was added in the southeastern territory, where the company had had no representation of any kind prior to 1926 but had reached its customers through mail; in two years the sales volume increased almost 150%.

The duties of the district managers were to obtain, when necessary, desirable distributors; to sell directly to companies operating chains of filling stations; and to cooperate with the wholesalers. The district managers called on garages and service stations with the salesmen of wholesalers. They also gave sales talks at regular meetings of salesmen, which were held by the wholesalers for this

purpose. The district managers were paid salaries plus a small percentage bonus on sales above minimum annual quotas; their expenses also were paid. This method of payment put the company in a position to require of its managers missionary work and service guidance to the distributors and users of Wendell equipment.

COMMENTARY: This case affords a significant illustration of the employment of selected distributors to sell equipment of substantial unit value. The conditions which favored the employment of distributors in lieu of direct sale were the infrequency of repeat sales, the widely scattered market, and the number of calls often needed to consummate a sale. The unit value of Wendell products was high enough, not only to warrant consideration of direct sale, but also to make it worth while for distributors to give special attention to those products. The company had a high standing and its products were of good repute.

These favorable conditions, however, were not sufficient in themselves to enable the company to attain successful distribution through wholesale firms. The success of the company's plan, facilitated by those favorable conditions, is to be attributed to the care with which the distributors were selected, the advertising program which took much of the load of sales promotion off the shoulders of the distributors, and the activities of the company's district managers in stimulating and maintaining the interest of the distributors and their salesmen in the sale of Wendell products.

January, 1929

M. T. C.



## SAMPSAG FURNACE COMPANY<sup>1</sup>

### MANUFACTURER—FURNACES

#### DISTRIBUTION CHANNELS—*Use of Distributors to Supplement Direct Selling.*

Outside of its local territory, a company manufacturing warm air furnaces sold its products through dealers with exclusive sales territories; in the local territory, however, the company had followed a plan of direct sale to users. In order to obtain more adequate coverage of the local market, the company decided to make use of dealers in the local territory also, while still continuing its direct sales efforts.

#### MARKET COVERAGE—*Use of Dealer Distribution to Supplement Direct Selling.*

A company manufacturing warm air furnaces and selling them directly to users in its local territory decided, in order to obtain more adequate market coverage, to seek dealer distribution in that territory. The company continued to sell directly, in competition with its dealers. Inasmuch as many of the dealers had customers scattered throughout the territory, the company judged it inadvisable to grant them exclusive sales rights. The plan proved unsatisfactory, chiefly because the dealers failed to supply adequate installation service. Price competition also developed.

#### SALES ORGANIZATION—*Segregation of Salesforce by Types of Customers.*

When a company manufacturing furnaces supplemented its direct sales efforts in its local territory by sales to dealers, it decided that different salesforces should be used to sell to users and to sell to dealers.

SALES PROMOTION—*Locating Prospective Customers.* One of the major problems of a company manufacturing warm air furnaces was to locate prospective purchasers of furnaces to replace existing installations. The company sought to have dealers to whom such prospective purchasers addressed inquiries refer those inquiries to its sales department. For each reported inquiry that resulted in a sale, the dealer was paid five dollars.

(1924-1928)

The Sampsag Furnace Company manufactured warm air furnaces for installation in public and private buildings. In 1924 it was selling its furnaces through distributors everywhere in

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<sup>1</sup> Fictitious name.

the United States except in the territory within 150 miles of the large city in which it was located. In that territory the company sold directly to users by means of its own salesmen. In 1924 it was proposed that the company should secure distributors for the local territory also.

About 90% of the company's sales were of replacements for cheap furnaces originally installed in new buildings. It was the company's experience that in buildings erected for speculative purposes cheap furnaces usually were installed. Such installations lasted only a few years, whereas Sampsag furnaces properly installed had many years of life. Furnaces installed in buildings of a speculative character were purchased by the contractors; in the case of new buildings not of a speculative character, the furnaces usually were selected by the owners. The vice president of the company made the following statements in this connection:

In the case of new buildings of a speculative character, price is the only consideration except in cases of high class speculative builders. These use well advertised articles as a sales asset to the house. The home owner is interested in the efficiency of the plant and is willing to pay a good price for a good article.

This company does not seek cheap speculative new building business as it is unprofitable and detrimental to the good name of a heating system. We actively solicit new homes being built by the owner and the replacement jobs in speculative houses that have been sold. This gives us an opportunity to re-engineer, re-design and modernize an inefficient installation.

The correct planning and installation of a warm air heating system was an intricate problem requiring involved computations. It was important to compute accurately the heat losses of a building, the size of furnace to use, the areas of piping, the size of wall stacks, the site and location of registers, and other factors; in making these computations, the size and location of rooms, their window exposures, the materials of which the walls were constructed, and various other things had to be taken into consideration. A Standard Code regulating the installation of warm air heating systems had been approved and issued by the leading associations interested in the industry, and all persons engaged in planning and installing such systems were encouraged to follow this code, a brief section of which is quoted here to indicate the complexities involved.

## ARTICLE NO. 3

Method for Determining Sizes of Warm Air Pipes, Wall Stacks and  
Furnaces for Use in Residences*Method for Determining Sizes of Basement Warm Air Pipes**Section 1. Each First Floor Room.*

Divide square feet of glass by 12

Divide square feet of net outside wall by 60, (See Table A)

Divide cubic contents by 800

Add together the above and multiply by 9

The result is the area of the basement pipe

The sum of:

Glass (sq. ft.) (Note 4)  $\div 12$ Net Wall (sq. ft.) (Note 5)  $\div 60$ Cubic Contents  $\div 800$ 

$$\left. \begin{array}{l} \text{Glass (sq. ft.) (Note 4) } \div 12 \\ \text{Net Wall (sq. ft.) (Note 5) } \div 60 \\ \text{Cubic Contents } \div 800 \end{array} \right\} \times 9 = \text{Area of Basement Pipe}$$

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*Basis for Working Rules for Pipes*

(a) These formulae are for 70 degrees temperature difference (outside temperature zero, inside temperature 70 degrees Fahrenheit). When temperature difference is more than 70 degrees, add  $1\frac{1}{2}\%$  per degree to final figures. When temperature difference is less than 70 degrees, deduct  $1\frac{1}{2}\%$  per degree from final figures.

(b) The values as given in Table A for use in the working rules, article 3, sections 1-2 and 3 are derived as follows:

**EXAMPLE:**

The factor 60 in Table A, Item No. 1, is based upon a co-efficient of heat transmission of 0.23 B.t.u. per square foot per degree difference per hour, thus:  $W \times 0.23 \times 70 \div 111 = \text{sq. in. first floor leader to compensate for the heat loss through walls only.}$  In this,  $W$  = net area of exposed wall in sq. ft.; 0.23 = co-efficient of transmission in B.t.u. per sq. ft. per degree difference per hr.; 70 = difference in temperature of air on inside and outside of wall; 111 = heat delivering capacity of one square inch of first floor leader pipe for a register temperature of 175 degrees Fahrenheit. Reduced

to its simplest approximate form this is  $\frac{W \times 9}{60}$ . Likewise substitute

167 for second floor and 200 for third floor in place of 111.

The values in Table A for the different types of walls were obtained by substitution of proper co-efficient of heat transmission instead of 0.23 in the above formula.

The Sampsag Furnace Company manufactured only furnaces; it did not make other parts necessary to a complete installation. Nevertheless, it was of great importance to the company that heating systems in which its furnaces were used should be properly



installed, since if the systems failed to give satisfaction to the users the blame was placed upon the furnaces. In its local territory where it sold directly, the company made its own installations, but in other territories the installations were made by the dealers representing the company. The company constantly endeavored to have its distributors exercise care in making installations. It offered to plan installations for distributors if the distributors would supply it with the necessary data. The distributors commonly did not make use of this service, however. Usually, when a prospective customer for a heating system asked a dealer how much a heating system would cost, the dealer made a rough estimate and then, if he got the order, fitted his plans to his original estimate.

Most of the company's distributors were small firms handling metal work, such as cornices and spouting, in addition to furnaces. Often the men in these firms were skilled metal workers. An executive of the Sampsag Furnace Company stated, however, that most of them were poor business men and were not capable of making, or at least not willing to make, the elaborate computations required for the proper planning and installation of warm air heating systems. Moreover, the distributors wished to make the installations as inexpensive as possible, and hence frequently tried to save in piping and other materials. The average annual business of a typical dealer representing the company amounted, it was stated, to about \$30,000. An average furnace installation was stated to amount to \$300. The company's furnaces were priced at from \$40 each to several hundred dollars or more.

The Sampsag Furnace Company was represented by approximately 4,000 dealers outside of the local area. Those dealers had exclusive sales territories. For selling to them the company had a salesforce of 10 men. The dealers bought the furnaces outright from the company.

In 1924 the company was making all sales in its local territory directly to users by means of four salesmen; on these sales the company also made the installations. Competitors of the company selling in that territory made use of dealers. It was thought that the company might be able to increase its sales volume in the local area if it also made use of dealers there. The dealers would have many contacts with potential customers and might be able to secure orders from customers who otherwise the company

would not learn were in the market. One of the company's important problems was that of locating prospective customers.

Because of the possibility of increasing its sales by such a policy, the Sampsag Furnace Company decided to supplement its direct sales efforts in the local territory by sales to dealers. The company found it impracticable to grant exclusive territories to the dealers inasmuch as each dealer had friends scattered throughout the local area. In 1924, when the company made this change in policy, it had 4 salesmen in its local territory. At the time of the change, the company added 4 men to its local salesforce, making a total of 8 salesmen in that territory. One of these men sold exclusively to dealers and 7 sold directly to users. Different men were used for the two types of sales work because the dealers and the company, in effect, were in direct competition and it was thought that salesmen who tried to get orders directly might experience difficulty in securing orders from dealers. By 1928, the company had added two more salesmen to its salesforce for direct selling in the local territory.

On orders received directly by the company from persons in the local territory to whom the dealers had been trying to sell Sampsag furnaces, the company decided to give the dealers a \$10 protection. That is, if a dealer advised the company that he had sales negotiations under way with a certain person, the company, if that person placed an order directly, added \$10 to its usual direct sales price and gave the \$10 to the dealer.

In 1928 the company had contacts with 250 dealers in the local territory. At that time about 25% of the company's total sales in the local territory were being made to the dealers. In the four years from 1924 to 1928 the company's local sales increased 150%, amounting to several hundred thousand dollars in 1927. The vice president of the company stated that a large part of the increase represented by sales to dealers was to be attributed to the work of an exceptionally competent salesman whom the company had added to its salesforce, rather than to the plan of dealer distribution itself. In fact, this executive was of the opinion that the company's policy of selling to dealers in the local territory was a mistaken one.

In the first place the company experienced in the local territory the same difficulty with dealers that it had experienced elsewhere; namely, the dealers' inability or unwillingness to figure correctly

on jobs. Because of this fact the dealers in the local territory sometimes underquoted the company on the same job. There also was price competition among local Sampsag dealers working for the same order. For most dealers' installations of Sampsag furnaces in the local territory the company's salesman actually made plans and figured estimates. The dealers, however, frequently failed to abide by the company's plans. It not uncommonly happened, moreover, that after a Sampsag salesman had worked out plans for some job at a dealer's request, the dealer bought the furnace for the installation from some other manufacturer. In the local territory, Sampsag salesmen visited the larger dealers about once every three days. The vice president of the company reported that:

Dealers for the most part, work on repairs and replacements. A few progressive ones go after new buildings. Their contacts are of a miscellaneous character and are not consistently worked nor properly followed up.

Because of the unsatisfactoriness of its plan of sale through dealers, the company withdrew the \$10 protection which it formerly had afforded to the local dealers.

An executive of the Sampsag Furnace Company stated that about the only service of value which the local dealers gave the company was to unearth prospects. In view of this conclusion, the company, in 1928, began to put into effect a plan whereby it could have this service without the disadvantages of selling to dealers. Under this plan the company made arrangements with various dealers whereby the dealers displayed signs supplied by the company and referred to the company all inquiries received for furnaces, for which service the company paid the dealers \$5 per inquiry resulting in a sale. These dealers did not actually sell furnaces but were of a type to whom prospective purchasers might be expected to address inquiries. By July, 1928, the company was represented by about a dozen dealers on these terms. It expected, however, to continue selling to dealers in the local territory.

The company also had introduced another plan which was designed to secure inquiries and to create goodwill. It agreed to service furnaces in the local territory, both its own furnaces and those of other makes, at a nominal annual charge. In 1928, the company had 7,000 standing orders for such service. The



vice president of the company in 1928 stated that the company's other sources for leads were as follows:

Our sources for leads are satisfied users; real estate transfers as published daily; reports from several industries with whom we cooperate, such as oil burner installers, coal and coke dealers, and regulator distributors; and direct mail campaigns to selected lists of consumers in selected territories.

The Sampsag Furnace Company had done little advertising until 1928. In that year it used several full-page insertions in a local newspaper followed by a direct mail campaign to a selected list of prospective customers.

The company was dissatisfied with its plan of dealer distribution outside the local territory as well as in it. The dealers, it was stated, were not aggressive in their sales methods, often did not make satisfactory installations, and frequently were slow in making payments. The company had thought of undertaking to use hardware retailers as distributors in place of the type of dealers it then was using. However, as one of the executives expressed it, hardware retailers were shelf goods men and were not accustomed to handle sales of such items as furnaces. Moreover, it was not as though all that was required was someone to sell furnaces; it was necessary to sell the entire heating system and to install it.

The company also had considered establishing its own organization to sell and install heating systems throughout the United States. The expense of this plan made it appear unfeasible. The company was studying the situation critically and hoped eventually to arrive at some sound solution.

**COMMENTARY:** The question of employing distributors outside the local territory in which the manufacturer had sold directly to house owners prior to 1924 and the question of improving the services of those distributors were not directly involved in this case. The specific problem was that of handling the distribution in the local territory.

When the Sampsag Furnace Company decided in 1924 to sell to dealers in the local territory, it decided also to continue to sell directly to house owners; in fact it added three more salesmen for that purpose in 1924 and subsequently two more men were added to the direct salesforce. Thus the company embarked on a plan that involved competition between itself and its distributors. Such competition

seldom is economical; apprehension of price cutting almost inevitably arises on one side or the other; friction is likely to occur; and to avoid incurring the ill will of the dealers the manufacturer usually is impelled to make uneconomical and undeserved concessions to the dealers. This case was no exception to that general conclusion, for the Sampsag Furnace Company found that its salesmen were called upon to make plans and estimates for dealers who frequently failed to abide by those plans and who sometimes sold other makes of furnaces to fill orders for which the Sampsag Furnace Company's salesmen had worked out plans.

The major reason which led the company to sell to dealers in the local territory was to enlist their aid in locating prospective customers. There was no gain to the company from the stock-carrying standpoint or from the standpoint of promptness in deliveries. No gain was realized, furthermore, on the score of installation service; on the contrary, the dealers often rendered less satisfactory installation service than the company could provide.

The real problem was to determine the most effective means of locating prospective customers, and a careful diagnosis of that problem needed to be made. Before deciding to sell to dealers with whom it was to compete, the company would have done well to examine carefully the methods employed by its salesmen for locating prospects, in order to ascertain whether those methods could not have been materially improved. The possibilities of effective advertising and of other means of locating prospects deserved to have been thoroughly considered before the company decided upon the course that was adopted.

October, 1928

M. T. C.

## TARLETON MACHINERY COMPANY<sup>1</sup>

### MANUFACTURER—MACHINE TOOLS

**DISTRIBUTION CHANNELS—***Use of Manufacturers' Agents in Preference to Direct Sale.* A company that manufactured turret lathes and automatic, single-purpose machine tools, sold the latter, which were relatively high in price and required demonstration and sales engineering service, directly to users throughout its territory. Turret lathes the company sold directly in the East, but in the Middle West it made use of manufacturers' agents. It was proposed that the company sell the lathes directly in the Middle West also.

(1928)

The Tarleton Machinery Company manufactured vertical machine tools of two types: turret lathes, which were standard machines with wide applications; and automatic, high-production, single-purpose machines. Throughout the entire United States the company sold its single-purpose machines directly to users by means of its own salesmen. In the East it also sold its turret lathes by means of its own salesmen. In the Middle West and Far West, however, sale of Tarleton turret lathes was carried on by manufacturers' agents. In 1928 it was suggested that the company should discontinue sale by manufacturers' agents.

Tarleton turret lathes usually required one operator each. They were standard machines and could be used for a variety of applications in machine shops and in manufacturing plants which did not produce in large enough quantities to justify use of single-purpose machines. Tarleton lathes ranged in price from \$4,800 each to \$11,000 each. The company had been selling turret lathes for about 20 years. These machines possessed special features but were in direct competition with similar machines of other manufacturers.

The company's automatic machines, unlike the turret lathes, were single in purpose. Each machine performed only one operation or series of operations. These machines consequently could be used only in very large plants. They ranged in price from

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<sup>1</sup> Fictitious name.



\$12,500 each to \$28,000 each. They had no direct competition; the competition met with in selling these machines was competition with other methods of manufacture, not with other machines of the same type.

The sales manager of the company stated that the total market for the company's machines in the United States was limited to between 3,500 and 3,800 firms. Sales in number of machines were divided about evenly between the two types; in dollars, however, sales of automatic machines were much the larger.

In addition to the machine tools, the company made small tools. These were designed for use with Tarleton machines although they could be used on other machines. The company, however, made no effort to sell the small tools except in connection with sales of its own machines. Customers wishing small tools subsequent to purchase of the machine tools customarily sent in their orders without solicitation. The small tools required with one of the company's automatic machines ranged in value from \$2,000 to \$8,000; a somewhat smaller expenditure for tools was required for one of the turret lathes.

The company had begun to manufacture automatic, single-purpose machines in 1914. Little was done to introduce them until 1919, however. At that time the company was using its own salesforce to sell its turret lathes in points not more than a night's journey from its New England plant and was using manufacturers' agents in other territories. The agents had exclusive territories and received a commission of about 12½% on all sales in those territories. They sold no machines that competed with the Tarleton line.

In the period from 1914 to 1917, the company had experimented with use of manufacturers' agents in the eastern territory. At that time it had three salesmen selling in that territory. These salesmen had been retained to assist the agents. The agents that were selected together had more than 100 salesmen. It had seemed to the Tarleton Machinery Company that use of those agents presented an excellent opportunity for the company to increase its salesforce. The results obtained, however, had not been satisfactory to the company, and the arrangements with the agents in the eastern territory had been discontinued. One reason for this was that many large firms insisted upon buying directly.

When it placed its automatic machines on the market the company had decided to sell them in the same way that it was selling its lathes; namely, by its own salesmen in the East and by agents in other territories. This arrangement had been continued until 1923. At that time the president of the company visited a middle western city in which sales of the automatic machines had been smaller than anticipated. The manufacturers' agent for the machines in that city reported that there was no market for the machines there. The president, however, succeeded in selling several of the machines in a few days. This and similar incidents led the company to conclude that for its automatic machines its own salesmen were necessary. It therefore placed its own salesmen in the Middle and Far West to sell the automatic machines, but continued the agency arrangements for the turret lathes.

In 1928 the company had 6 manufacturers' agents and 12 salesmen. Eleven of the salesmen had definite territories, in which they lived, and one was free to be sent anywhere. The sales manager stated that it was necessary for the salesmen to be engineers. They must be able to advise prospective customers as to sizes of machines required, the character of tools to be used, and the returns which the users would experience on their investment. It was necessary for the salesmen of both types of machines to see engineers and mechanical men responsible for production. The company's salesmen called about once a month on large customers and three or four times a year on others. Usually a period of negotiation of several weeks or even months preceded a sale. The salesmen were paid flat salaries of from \$6,000 to \$12,000 a year. Sales fluctuated widely from month to month and year to year, so that a commission plan of payment was deemed unsatisfactory.

The company maintained a sales engineering department, with 15 draftsmen and 4 engineers, to assist the salesmen. The salesmen obtained drawings and pertinent information from prospective customers and submitted them for study to the sales engineering department. That department decided upon the best methods of handling the work for which machines were required, prepared the necessary drawings, and made time studies of the rate of production per hour. The cost of making the time studies was charged to sales overhead and not to particular jobs. The company was satisfied if 50% of the time studies which it

made resulted in orders. The cost of making some time studies amounted to as much as \$1,000. The average cost, however, was \$10. The sales engineering department also designed tools to be used with the machines. The cost of this work was included directly in the price of the tools to the customers.

In addition to its salesmen, the company maintained a crew of 14 demonstrators. The work of these men was to explain the methods of operating the machines, after they had been sold and installed, and to instruct operators in the purchasers' organizations in their use. This work served to protect the machines against unsatisfactory performance resulting from improper use. When the turret lathes first were introduced the company had done a large amount of demonstration work. Those machines not only had been new to the company but also to industry at large. By 1928, however, little demonstration work on those machines was required. In most machine shops and manufacturing plants there were mechanics who had had experience in operating turret lathes.

Most of the company's demonstration work, therefore, was done for the automatic machines. Demonstration was, in fact, almost always required for those machines except in instances where a plant made subsequent purchases of machines to perform the same operations. Usually, however, demonstration was required even on a second purchase by the same firm, since the second machine purchased probably would be designed to perform a different operation from that performed by the first. For this reason, the company anticipated that demonstrators always would be required for its automatic machines.

The company made no charge to customers for demonstration service on new machines. If, after a machine had been in operation for some time, however, a customer asked for service, a charge was made. The cost of demonstration, like the sales engineering expense, was charged to sales overhead. Each installation of an automatic machine in a plant where a duplicate of the machine had not already been installed, required the service of a demonstrator for a period of from one week to several months. Demonstrators were paid salaries of from \$50 to \$80 a week.

The company had some difficulty in seeing that its customers did not retain the demonstrators longer than they were needed. Sometimes customers found the company's demonstrators so



helpful that they tried to keep them indefinitely. The company treated each case of this kind on its own merits. In one instance, for example, a firm which had just installed seven of the company's automatic machines kept the company's demonstrator so long that some of the executives of the company thought the man should be recalled. The sales manager, however, realized that that firm would subsequently be a potential purchaser of many more Tarleton machines. He, therefore, permitted the demonstrator to remain as long as the customer wished. Later the customer bought 26 additional machines at a price of \$17,000 each.

The company attributed its success in large part to its initiative in developing improved types of machines and in extending engineering sales service and demonstration service to users. Prior to 1928 most of the company's sales of automatic machines were initial sales. The company expected a demand for replacements to arise before long, however.

The company advertised extensively in trade papers and directly by mail to production executives. The chief object of the advertising was to obtain inquiries which could be referred to salesmen or manufacturers' agents. Most of the company's sales were made following inquiries from prospective customers.

None of the company's agents for the turret lathes carried stocks. All shipments were made from the factory; the company preferred to have complete control of its stocks. The company billed the agents and not the purchasers. Tarleton salesmen for automatic machines in the agents' territory assisted the agents in selling the turret lathes. The company had reliable evidence that its own salesmen were responsible for at least 50% of the agents' sales.

The sales manager stated that the company would require four additional salesmen to replace the services of the agents in the Middle West; the agent on the Pacific Coast would be retained under any circumstances as the potential customers there were few and widely scattered. The sales manager was of the opinion that it would be no more costly for the company to cover the middle western territory with its own salesmen than it was to use manufacturers' agents. He was inclined to believe also that the results would be more satisfactory. The middle western agents had represented the company for many years, however, and the

company was loath to discontinue relations with them. Use of agents also simplified the work of credit and collection. No decision had been reached by April, 1928.

COMMENTARY: The experience of the Tarleton Machinery Company had demonstrated that for marketing these machines company salesmen were more effective than manufacturers' agents and were to be preferred to manufacturers' agents in all but the sparse markets. Hence the pending decision regarding the displacement of the agents by company salesmen for selling turret lathes in the Middle West was one that hinged upon personal relationships rather than upon factors of economy and effectiveness. The conditions which enabled the company salesmen to yield better results than manufacturers' agents in this case were the large unit value of each machine, the intimate technical knowledge of performance required, and the advantages of close coordination between the work of the salesmen and that of the engineering and demonstration departments of the Tarleton Machinery Company.

This company, it is to be noted, charged the cost of its sales engineering department and of its demonstrators to sales overhead, and, unlike the Otway Machinery Company,<sup>2</sup> did not attempt to collect payment for these services from customers. The fact that these services were required by most customers of the Tarleton Machinery Company whereas the engineering services of the Otway Machinery Company were required by only one-fourth of its customers warranted this difference in practice. Inasmuch as the services of the demonstrators employed by the Tarleton Machinery Company were utilized, however, almost exclusively for the automatic machines, it would have been more accurate to charge the demonstration expense entirely to the automatic machines instead of into general sales overhead.

May, 1928

M. T. C.

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<sup>2</sup> See Otway Machinery Company, 6 H.B.R. 311.

## WINSOR MACHINERY COMPANY<sup>1</sup>

### MANUFACTURER—MACHINE TOOLS

DISTRIBUTION CHANNELS—*Distributors Used in Preference to Manufacturer's Sales Branches.* A company which manufactured a line of machine tools experimented several times with selling directly to users by means of factory branches. The sales cost under this plan, however, was judged to be excessive, except in two territories, and the company consequently depended upon machinery merchants for distribution outside those territories.

(1920-1928)

Early in 1920 two companies manufacturing machine tools were combined with the Winsor Machinery Company, which manufactured lathes and radial drills. At the time of this consolidation, the products of the Winsor Machinery Company were being sold by a firm of machinery merchants with branches in important cities throughout the United States. The two other manufacturing companies also had sold their products through machinery dealers. After the consolidation it was proposed that the Winsor Machinery Company should discontinue distribution through this firm and establish sales branches in five or six industrial centers.

The company's full line, after the consolidation, included lathes, radial drills, vertical millers, planers, production milling cutters, and a few single purpose machines. Total average annual sales were about \$750,000. The market for the company's products consisted of manufacturers of machinery and metal parts. With the exception of the single purpose machines, Winsor machines, although they had special features that distinguished them from other makes of machine tools, were of standard types with which the men in manufacturing plants were familiar, and hence they seldom needed demonstration. The company had several men who were prepared to demonstrate or service the machines whenever necessary. The single purpose machines were special and commonly required demonstration. It was necessary for salesmen of any of the machines to have technical knowledge and, for the single purpose machines, sales engineers

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<sup>1</sup> Fictitious name.



were needed. The company endeavored to sell its machines on a basis of performance and quality. Competition among machine tool manufacturers was keen, however, and hence price tended to be an important consideration in sales.

The Winsor Machinery Company advertised in machinery trade papers. It also prepared catalogs and direct mail literature for users.

The machinery firm that was selling Winsor lathes and drills received a  $12\frac{1}{2}\%$  commission on sales of Winsor machines, and this was practically the only sales expense that the Winsor Machinery Company had incurred. The distributor was unwilling to sell the new Winsor lines, however, inasmuch as it already was selling competing makes of tools. Another reason for discontinuing distribution through the wholesale firm was the company's dislike of being entirely dependent on one firm for sales. With its wider line, moreover, the Winsor Machinery Company appeared to be in a better position for selling directly to users than it previously had been. A plan of direct sale would make the company independent of distributors and would assure the Winsor line of adequate sales attention. With these considerations in mind, the company decided to discontinue dealer distribution except in the more sparsely settled territories and to establish its own sales offices. This was done in the first part of 1920.

The cities chosen for the location of sales branches were Chicago, Detroit, Cleveland, Philadelphia, New York City, Indianapolis, and Buffalo. In each of these cities the company rented office space and placed one or two salesmen and a stenographer. The expense of operating the sales branches was not expected to exceed 10% to 15% of their sales; to keep the sales expense at this figure, however, it would be necessary to increase sales materially. The salesmen were paid salaries and commissions of 1% to 2% for sales in excess of quotas. The salesmen were experienced men who the company was confident were qualified to sell its products. The company referred inquiries received at the central office from the territories of the sales offices to those offices. It did not undertake to route the salesmen, however, or to exercise any other measure of close supervision over them.

Shortly after the company opened its branch offices, the general business depression of 1920-1921 set in and the expense percentage

of the branch offices was far in excess of the planned figure. In the latter part of 1920, therefore, when the branches had been in operation for less than a year, the company decided to discontinue all of them except those in New York City and Detroit and to sell through machinery distributors in other places. Sales of the Detroit and New York City offices were sufficient to keep the sales expense percentage at what the company deemed a reasonable figure. Most of the company's sales of automatic, single purpose machines were made in Detroit, moreover, and since those machines were not standard there was more advantage in providing direct sale for them than for the other machines.

In 1928 the company still was operating the two branch offices and was making use of distributors in other territories. At that time it had several distributors with exclusive territories in the United States. Those distributors were located at Cleveland, Philadelphia, Pittsburgh, San Francisco, Syracuse, Los Angeles, and Chicago. They sold complete lines of machine tools. The company paid them a commission of  $12\frac{1}{2}\%$  on all sales of its machines in their territories. In addition to the exclusive representatives the company had several distributors without exclusive territories. The commission of those distributors was 10% of their sales of Winsor machines. The company's sales manager visited each distributor at least twice a year. Approximately half the company's total sales were made by its two branch offices. Annual sales of the New York City branch were approximately \$100,000; and annual sales of the Detroit branch were about \$250,000. The company's total sales expense was from 10% to 15% of sales. This included distributors' commissions, salesmen's salaries and expenses, branch office expenses, and the salaries of sales executives.

The company preferred to sell directly to users whenever it could without unduly increasing its sales expenses. The company's gross margin was not sufficient to warrant a sales expense of more than 15% in the executives' opinion. The company recognized that its experiment with direct selling during 1920 was not conclusive in view of the depressed condition of business at that time and also in view of the brief period that the plan of direct sale was tried. Twice after 1921, however, the company had opened a sales office in Chicago and had undertaken to sell directly there. During all of 1923 it operated a Chicago office.

At the end of that time the office was closed because of the high sales expense. Again in 1925 the company opened an office there. This time likewise the sales expense was deemed excessive and at the end of a year the office again was closed. During the periods when the company operated its own office in Chicago, sales in that territory showed some increase. The increase was insufficient, however, to offset the added expense necessitated by direct sale. The company judged that with annual sales in a territory of \$100,000 it could afford to sell directly to users. Sales in the Chicago territory were little more than half that amount.

Sales in distributors' territories had not been entirely satisfactory to the company. The executives attributed this in large part to the fact that some important items in the Winsor line had not been kept up to date. In July, 1928, one of the executives made the following statement with reference to this situation:

The matter of sales in distributors' territories is influenced considerably by whether or not machines are up to date, etc. In the past few years we have been handicapped somewhat by our line of lathes in particular not having been kept up to date to meet competition, which is intensive on this particular product. We are now bringing out, however, new lines which we hope will remedy this condition in future and enable us to get the various dealers to push our products more than they have in the past. As you can see, the dealer will always pick the lines of least resistance and endeavor to select equipment which is most easily marketable.

COMMENTARY: Inasmuch as the machines sold by the Winsor Machinery Company were large units and required that the salesmen have technical knowledge of their performance, it was necessary that they be sold either directly by the company's own salesmen or by carefully selected distributors. The company's experience, however, throws little light on the circumstances which should govern the decision, in such a case, on the question of choosing between a plan of direct sale and the employment of selected distributors. The company vacillated between the two methods of distribution and in 1928 it hardly was in a better position to decide the question definitely than it had been in 1920.

The fact that the company's product had not been kept up to date was no more an explanation of the lack of thoroughly effective distribution by machinery firms than it was a reason for the lack of success of sales offices in various cities. Both types of distribution needed up-to-date merchandise to succeed. One possible explanation of



the non-success of the sales offices that were closed may have been inadequate planning of sales work and inadequate guidance and supervision of the salesmen placed in those offices. If a salesforce is to render effective performance, the sales work requires the same sort of careful planning and supervision that is applied to production in well-managed factories. There may have been other reasons for the failure of various sales offices to secure a sufficient volume of sales to bear the costs of operation, but it would be idle to speculate on them without a much more thoroughgoing analysis than the company apparently had made.

October, 1928

M. T. C.

## WILHOSE COMPANY<sup>1</sup>

### MANUFACTURER—GARDEN AND MECHANICAL HOSE

**DISTRIBUTION CHANNELS**—*Selected Distributors Used in Preference to Direct Sale.* A manufacturer of garden and mechanical hose which had maintained sales branches and branch stocks, selling a substantial part of its output directly to retailers and industrial users, decided, in order to effect economies, to discontinue its branches and to sell entirely through selected mill supply firms and hardware wholesalers. This plan of distribution proved successful for several years, but, in 1928, the company announced that, because the distributors had not been aggressive in selling its products and had not carried adequate stocks, it thereafter would solicit orders directly from retailers and industrial users.

**PROFIT SHARING**—*Distributors Given Share in Manufacturer's Profits.* A company manufacturing garden and mechanical hose had decided to sell its product entirely through selected distributors. To encourage the distributors to sell the product aggressively, the company, at the end of each fiscal year, divided among them, in proportion to their purchases during the year, 25% of the company's net profits for the year after deduction of an amount equal to 10% of the capital invested in the company.

**PRICING**—*Adoption of a One-price Policy.* A company manufacturing garden and mechanical hose, which had decided to sell its product entirely through selected distributors, adopted a one-price policy. The company published its price lists and sent them to its distributors and to competing manufacturers.

(1922-1928)

The Wilhose Company manufactured braided and molded hose. Its sales volume in 1927 was somewhat less than \$3,000,000. About 40% of its sales were made up of several grades of garden hose sold to consumers chiefly through retail hardware stores. The remaining 60% of sales were of mechanical hose, a line of about 100 items which the company sold to more than 100 different industries using the hose either as accessory equipment or as a fabricating part. For over 10 years prior to 1922 the company had distributed its products through its own branch offices and

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<sup>1</sup> Fictitious name.

warehouses; 22% of sales had been made directly to industrial users, 10% directly to hardware retailers, and the remainder to mill supply firms and hardware wholesalers. In 1922, however, the company had decided to discontinue its branches and to sell entirely through mill supply firms and wholesalers. Later, in 1928, the company announced a modification of this policy.

The company originally had adopted the policy of selling directly to industrial users and retailers as a means of insuring aggressive marketing methods; all the company's 17 competitors sold at least part of their output directly to users and retailers. The Wilhose Company had established 12 branch sales offices at each of which it carried stocks varying between \$100,000 and \$150,000. Although 68% of the company's sales were made to wholesalers and mill supply firms, most of the time of the sales-force, which numbered 40 men in 1921, was spent in soliciting orders from manufacturers and retailers. The company accepted orders of any size; it followed no definite price schedule. The general policy was to accept all business at the best prices obtainable. Many of the company's industrial customers that used hose in large quantities purchased monthly in quantities varying from \$500 to \$5,000. Practically all orders from the company's own customers were filled from stocks at the branch warehouses. On many occasions the Wilhose Company made shipments directly to the customers of its distributors; wholesalers and mill supply firms constantly had been tending to buy in smaller quantities and to carry smaller stocks. The expense of operating the 12 Wilhose branches usually averaged about 18% of total net sales.

As a result of the fall in prices which occurred in 1920 and 1921, the Wilhose Company took a heavy loss on its stocks of rubber and other materials. The financial situation of the company at that time, although not perilous, was serious enough to make the company seek economies in marketing. Mr. Carey, president of the Wilhose Company, made a careful study of the company's marketing methods and came to the conclusion that direct selling was uneconomical. He estimated that two-thirds of the expense of operating the branches was really incurred for the direct sales, or for less than one-third of the total sales volume. In other words, the expense properly chargeable to direct sales was estimated to be approximately 40% of the volume of direct sales. Not only was the existing method of



selling uneconomical, in the judgment of the president, but it was unfair; users and retailers buying directly from the manufacturer received their hose cheaper than the direct selling cost warranted because part of this selling cost was borne by the sales made to supply firms and hardware wholesalers. The company in 1922, therefore, discontinued its branches and all direct selling to industrial users and retailers.

When this policy first was established, many large industrial users who had been buying directly from the Wilhose Company announced that they would not purchase from mill supply firms and, consequently, would change their patronage to other manufacturers. Mr. Carey answered them by saying that a manufacturing company could not sell directly to users at the same prices granted to mill supply firms and wholesalers without making a sacrifice in the quality of its products; or, if quality was maintained, without discriminating unfairly in favor of the users and at the expense of its distributors. The Wilhose Company wanted its products to be purchased on the basis of quality and economy in use; believing its products to be of superior quality, the company anticipated no serious loss in patronage following its change in policy.

By eliminating all direct selling, the company reduced its selling expense to 10% of net sales; whereas previously the expense had been 18% for the operation of the branches alone, plus advertising and administrative expenses. The number of its accounts was reduced from about 5,000 to slightly over 500, and the salesforce was reduced from 40 men to 8. Prices were lowered about 15% without decreasing the ratio of net profit to sales. Although some of the company's customers began buying from competitors, most of them continued purchasing Wilhose products. Furthermore, the volume of sales increased steadily.

The general underlying theory upon which Mr. Carey based his decision to sell entirely through wholesalers and mill supply firms, and upon which he developed his policy in dealing with those distributors, was explained in a booklet of his entitled "Thinking Thru." Mr. Carey recognized that mill supply firms and wholesalers throughout the country were disturbed over the security of their position, but he believed that most of them had not analyzed their problems. He pointed out in his booklet that the

wholesaling functions had to be performed and paid for and that "it seems logical that the wholesaler can render this service more cheaply than the manufacturer, as he spreads his expense over so many more lines and over a much greater volume of business than does the manufacturer handling his own line only." Mr. Carey also stated in what respects he believed that many wholesalers and mill supply firms had failed in their tasks and suggested remedies. The policies which he thought they should follow were presented in the form of planks in a platform:

1. Adopt and live up to a fair and consistent buying policy.
2. Adopt and live up to a definite and fair sales policy.
3. Develop an aggressive, creative salesforce.
4. Stand up for fair profits.
5. Concentrate on natural territory.
6. Concentrate on a well rounded-out line of goods, which you can sell consistently.
7. Support manufacturers who have consistent policies of distribution.
8. Work constructively with my competitors.
9. Be a better jobber; make people want to do business with my company.

Incidentally, Mr. Carey pointed out to the distributors that they were not taking advantage of their position to offer quicker delivery than was offered by manufacturers competing on a direct selling basis. Until four or five years after the World War, manufacturers requiring hose in substantial quantities customarily had carried reserve stocks; since that time, however, this practice largely had been discontinued and, consequently, more importance was attached to quick delivery.

As part of its plan of selling entirely through wholesalers and mill supply firms, the Wilhose Company adopted several methods to stimulate their cooperation. Most of the distributors frankly admitted that they considered their chief functions to be those of warehousing products and of accepting orders as they came; active solicitation of orders, except for products sold under their own brands, was looked upon as being outside their proper sphere of activity. Mr. Carey considered this a mistaken attitude. He held that distributors should carry only a few lines and should actively promote the manufacturers' brands. He recognized, of course, that manufacturers should reciprocate if they expected the distributors' cooperation.

Elimination of all direct selling was the Wilhose Company's first step in cooperating with its distributors. Its next step was to continue selling to a relatively small number of wholesalers and mill supply firms even though its own branches were discontinued. The total number of distributors was not changed appreciably, although readjustments were made in various localities to provide selected distribution. In most cities the company sold to only one hardware wholesaler and one supply firm; it did not grant exclusive agencies, however. In large cities, like Chicago and Philadelphia, the company usually sold to two or three mill supply firms. In all there were slightly more than 500 distributors, about equally divided between mill supply firms and hardware wholesalers. The company did not require its distributors to drop competing lines, although most of them did so.

A third step of equal benefit to the distributors and to the Wilhose Company was the adoption of a one-price policy. In pursuance of this policy, the company published its prices and adhered to them. Price lists were sent to distributors and to competing manufacturers, a practice which increased the confidence of the distributors. The distributors nearly always maintained the prices suggested by the company. No quantity discounts were granted because the company did not believe that distributors should be penalized simply because their sales volume was small. In fact, as Mr. Carey pointed out, many distributors with a small sales volume might be promoting Wilhose products more aggressively in their respective territories than distributors with a large volume of sales. One of the chief benefits of the one-price policy, Mr. Carey stated, was the resulting saving of time for all concerned; without a definite price policy much time was wasted in trading and bargaining, which, in the long run, resulted to nobody's benefit. The Wilhose Company was assisted in maintaining its published prices by the fact that it was a low cost producer and seller of high-grade hose. Most competitors had to adjust their prices with reference to the prices established by the Wilhose Company.

The Wilhose Company also inaugurated a policy of sharing its profits with its distributors at the end of each fiscal year; 25% of the net profits remaining after deduction of an amount equal to 10% of the capital invested was divided among the distributors in proportion to their purchases during the year just



ended. This sharing of profits at the end of the fiscal period had not resulted in any price-cutting. The share of the profits sent to the distributors usually was not large because the company periodically adjusted its prices so as to make only 10% net profit on net sales. The distributors received on the average an amount equal to about 1% of their sales of Wilhose products. Mr. Carey stated that since the distributors usually made about 2% net profit on their business as a whole, he was able to point out to them that their share in Wilhose profits increased their net profit on the company's hose about 50%.

The Wilhose Company further promoted a feeling of goodwill by permitting its customers to determine the amounts of allowances to be given them in adjustments for faulty goods or for other reasons. By thus showing confidence in the fairness of its distributors, the company not only reduced the amount of its allowances from about .75% of sales to less than half that ratio; but it also eliminated the higgling which formerly had accompanied the settling of allowances.

The eight salesmen employed by the Wilhose Company spent most of their time doing missionary work with the salesmen of the mill supply firms and wholesalers. Although the managers of distributing companies agreed to push Wilhose products, many of them needed to be stimulated from time to time. Moreover, their salesmen could be instructed with advantage by the Wilhose salesmen.

In a booklet entitled, "Thinking Thru," published by the company in the summer of 1928, the following announcement appeared:

#### OUR BUSINESS POLICY

A few weeks ago we sent the following letter to the jobbers who handle our product:

"THE WILHOSE COMPANY is forced to announce a modification of the sales policy which it has religiously adhered to for the past six years. We have been, during that whole time, cooperating with the jobbers and selling exclusively through jobbers, but we are reluctantly forced to the conclusion that only a comparatively few jobbers are cooperating with us. As an instance of this we have had our men working with the jobbers, bringing them in orders for our goods, and then the jobbers have not followed up the business which we originated. And, in a number of cases, they have substituted goods of other manufacturers when our goods were specified.

"They have not carried adequate stocks of our goods and, in innumerable instances, their salesmen have never solicited orders for our products. We can go on and enumerate instances of this kind to the point of becoming tiresome.

"It seems to us, therefore, that while we have given the jobbers the best we have had, most of them have not returned their best to us. We still believe that the jobbers' function is essential, and that manufacturers can distribute more economically through the jobber than direct, but we must also make sure that the jobber is performing his economic function as it should be done.

"We announce that in the future we will solicit business from industrial plants and dealers direct, at prices shown on our resale price sheets, at which prices jobbers can also take the business with a profit to themselves. We will not deviate from prices shown on our price sheets but, on the other hand, any jobber handling our goods, who sells at lower prices than those listed on our price sheet, we, in turn, will refuse to sell.

"We hope, in this way, to prove to the jobbers that our goods can be sold in increasing quantities and try to awaken the jobbers to their proper economic function by this method, where we have failed to do so, during the last six years, by the methods we have been pursuing.

"Those jobbers who are cooperating with us have nothing to fear from the announced modification of policy. Those jobbers who are not cooperating, must expect to meet our competition, but at a price which protects them.

"We take this occasion to announce that because of the above modification of policy, and the fact that many jobbers have used our profit sharing plan as an argument to get lower prices from our competitors, we hereby withdraw this profit sharing plan, effective August 31, 1928, the end of our fiscal year.

"As further evidence of interest in good merchandising, we must say that we feel that the present low prices made to mail order houses, chain stores, etc., by some of our competitors, are much against the interest of our regular sources of distribution and we, therefore, will name prices on competitive garden hose next season which will enable the local dealer to compete, in price on garden hose, with the mail order house and chain store. This is promulgating a principle that so far as it is in our power to effect, there shall be no special prices to anyone on braided hose."

**COMMENTARY:** The experience of the Wilhose Company in the period covered by this case exemplifies the conditions in the distribution of many industrial goods and also in a large section of the trade in consumers' goods. It reveals the causes of numerous troubles of manufacturers, supply firms, and wholesalers.

The Wilhose Company made a sincere effort to utilize the services of supply firms and wholesalers in distributing its products from 1922 to 1928. The cheapness of that method of distribution was accepted

as proven. It was not effective, however, and effectiveness in distribution was as essential as cheapness. A large manufacturing company, such as the Wilhose Company, needed to have effective distribution in order to maintain the stability of its operations, and a plan which did not yield stability was unsatisfactory.

The lack of effectiveness of the supply firms and wholesalers selected as distributors by the Wilhose Company can be attributed in large measure to their own shortcomings. Their efforts to utilize the profit sharing payments by the Wilhose Company to secure lower prices from competing manufacturers typifies the attitude of the trader in contrast to that of the distributor. Their failure to carry adequate stocks, their practicing of substitution, and their inactivities in following up the work of the missionary salesmen and in promoting sales of Wilhose goods showed that they did not grasp the significance of the company's plan or recognize its advantages to them. The weaknesses in the management of supply firms and wholesale firms revealed in this case constitute one of the major reasons for the precarious position in which many such firms are finding themselves. By tradition they are traders and only with difficulty, if at all, do they learn to function as effective distributors.

The methods followed by the Wilhose Company, prior to its change of policy in 1922, were thoroughly unsound in several particulars. The company was operating branches in competition with its own distributing customers, without standardization of prices, without protection to its distributing customers, and without limitation on the size of orders to be accepted. Confusion, waste, lack of effectiveness inevitably resulted from such practices. Even though the plan adopted in 1922 ultimately was discarded, it did correct the most serious of these abuses.

The fact that the plan adopted in 1922 was put into effect just at the beginning of the period of business recovery following the crisis of 1920 probably had a strong bearing on the interpretation of its temporary success. Business generally was improving from 1922 to 1927, so that it is difficult to determine how far the changes in general business conditions and how far the new plan can be credited with having brought about the improvement in the company's affairs after 1922. Nevertheless, improvement did occur, and, despite the ultimately revealed weaknesses of the scheme of relying upon supply firms and wholesalers, the plan adopted in 1922 had several unquestionably sound features. One of those features was the adoption of a one-price policy. In order that the evils of price cutting might be further avoided the company also decided to grant no quantity discounts. The plan lessened confusion, eliminated waste, reduced



marketing costs, and made possible lower prices. The reasons for its lack of continued success have been stated.

In reverting to direct selling in 1928, the company was accepting what seemed to have been the only alternative when the plan then in operation had proved to be ineffective. In reverting to a plan of direct sale, however, the company avoided some of the mistakes that had been made when branches were operated prior to 1922. The company continued to adhere to a one-price policy. It also allowed itself a gross margin to cover the cost of direct selling. That provision afforded protection to the supply firms and wholesalers who continued to handle the company's line. Perhaps the adoption of these policies in 1922 without the discontinuance of the sales branches would have been wiser, but that of course is a debatable question, and the company's experience from 1922 to 1928 was highly enlightening.

In addition to the points in this case which already have been discussed, there are several others to which attention should be called, and a few questions to be raised.

The company's profit sharing plan was analogous to an incentive discount since it was based upon the annual purchases by each customer. It differed from a discount in that the rate was governed by the company's profit. Sooner or later the profit sharing plan very likely would have proved unsatisfactory in that it was governed by the company's profits; customers could not be sure of receiving reward by that means commensurate with their sales promotion efforts. The lack of its success actually, however, is to be ascribed to its discount characteristics rather than to its profit sharing characteristics. It was not effective in inducing distributors generally to promote sales and it had a disturbing influence on the company's price plans. Hence the company was wise in discarding the profit sharing scheme. The company's experience adds to the accumulating evidence against incentive discounts.<sup>2</sup>

The company followed the safer and more economical course in deciding to sell directly rather than to expand its missionary sales work. Its product was one for which large scale missionary work could not be afforded.<sup>3</sup>

On three pertinent points the case is silent. The company had two distinct markets, the industrial market and the consumers' market; but no consideration had been given apparently to the possible advan-

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<sup>2</sup> See Dennison Manufacturing Company case, 3 H.B.R. 407; and Glencairn Company case, 5 H.B.R. 433.

<sup>3</sup> See Barbour Welting Company case, 2 H.B.R. 176; Chickamauga Company case, 5 H.B.R. 450; Nyanza Company case, 5 H.B.R. 454; Sussex Company case, 5 H.B.R. 460; Homer Food Company case, 5 H.B.R. 511.

tages to be derived by segregating<sup>4</sup> the sales organization for handling these two different types of markets. That is the first point missing. The second point is the absence of any reference to the problem of fixing the minimum size of order to be accepted or of classifying users and retailers in order to establish limits to the direct sales activities of the branches and thus keep their operating expense ratios at a minimum. The case, in the third place, does not furnish evidence regarding the basis for brand discrimination and the possibilities of utilizing advertising to promote sales. Unless the product was advertisable, at least to industrial users, it probably was not inherently suited for selected distribution such as was tried from 1922 to 1928. If it was advertisable but not advertised, then the company in the period from 1922 to 1928 did not perform its full task in promoting sales. These questions indicate some of the problems still before the company in 1928.

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<sup>4</sup> American Locomotive Company, 3 H.B.R. 149; Rice Motor Company, 3 H.B.R. 153; Nobel Chain Company, 6 H.B.R. 179; Prior Automatic Machinery Company (A), 6 H.B.R. 200; Nerlan Company, 6 H.B.R. 219; American Conveyor Company, 6 H.B.R. 226; Baxtam Machinery Company, 6 H.B.R. 233; Holden Company, 6 H.B.R. 360.

## OSMOND CORPORATION<sup>1</sup>

### MANUFACTURER AND DISTRIBUTOR—MILL WORK

**DISTRIBUTION CHANNELS**—*Change of Company-owned Wholesale Firms into Factory Sales Branches.* A company which manufactured and also purchased for resale window and door frames, doors, moldings, and other mill work owned two wholesale firms and supplied them with most of their requirements. The company originally had established the wholesale firms in order to discourage competitors from entering their territories. In those territories the company's salesmen and the salesmen of the wholesalers worked in direct competition. To avoid duplication of sales work and other activities, the company considered changing the two wholesale firms into factory branches, controlled centrally.

(1928)

The Osmond Corporation manufactured for stock window and door frames, doors, windows, moldings, cabinet work, stair work, interior trim, and other so-called mill work, sold in the white. The company also made special mill work to order and, in addition, purchased large quantities from other manufacturers for resale. Mill work was required in connection with all new buildings. Typically, the mill work for a building was estimated and figured upon as a separate entity in the building.

The Osmond Corporation was located in Chattanooga, Tennessee. Its sales territory included, roughly, the southeastern quarter of the United States. Freight costs on shipments of its products limited the company's effective selling area.

In 1928 the company had sales branches at which it maintained stocks in seven cities: Fort Worth and Galveston, Texas; Columbus, Georgia; Raleigh, North Carolina; Jacksonville, Tampa, and Miami, Florida. In addition to those sales branches, the corporation owned two wholesale companies, one of which was located in Montgomery, Alabama, and the other in St. Louis, Missouri. Those companies purchased goods from the Osmond Corporation, and to some extent from other sources, for resale. In their own

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<sup>1</sup> Fictitious name.



territories they competed directly with the Osmond Corporation. It was proposed that the corporation, in order to avoid duplication of sales effort, should discontinue the two companies and establish sales branches in their places.

Customers of the Osmond Corporation in most instances were retail lumber dealers or retail hardware stores. The corporation did not give them exclusive sales territories, but on the contrary sold to as many distributors as possible. The corporation was willing to sell to any distributor who would carry a stock of doors and sashes, the Osmond products most constantly in demand, for sale at retail. Occasionally, on large building jobs, the company sold directly to contractors; it maintained an estimating department to figure the amount of mill work needed for particular jobs. Even when it sold directly to contractors, the company usually allowed its distributors a commission or billed the goods through them.

There were about 50 Osmond salesmen traveling from the branches or from the main office. In general, the salesmen with headquarters at branch offices were directly under the control of those offices. The salesmen for the three Florida branches all were controlled from the Jacksonville branch; and salesmen for the Raleigh branch, which just recently had been opened, were directed from the main office. A typical sales branch organization consisted of a manager, an assistant manager, several salesmen, a bookkeeper, one or two stenographers, one or two clerks, a warehouse foreman, and fifteen or twenty manual laborers.

Osmond salesmen called on customers at intervals of from 10 to 30 days. Each salesman sold the company's full line. The salesmen often called upon distributors' customers in company with the distributors' salesmen. Osmond salesmen were paid salaries and bonuses on sales in excess of specified quotas.

In addition to employing salesmen, the company made use of direct mail advertising and obtained some orders directly by mail. More than half the company's total sales were made directly from Chattanooga rather than through the sales branches. To keep freight rates at a minimum, the company made use of pool shipments. Osmond salesmen took orders amounting to a carload from perhaps 10 distributors buying in less than carload lots and then the company made a carload shipment, consigned to a transfer company or to one of the customers, to be distributed among

the several firms ordering. The company had 50 or more points to which it made pool shipments regularly.

The Montgomery and St. Louis companies, although owned by the Osmond Corporation, operated independently. They maintained and controlled their own salesforces and in their territories competed directly with the Osmond Corporation; the territory of each wholesale company included about three states. Osmond salesmen from the main office covered the territories of the two wholesale firms; in fact, the Osmond Corporation had more salesmen in those territories than the wholesale companies had there. Osmond salesmen and salesmen of the wholesale companies visited the same prospective customers and endeavored to secure orders. Occasionally the different groups of salesmen entered into direct price competition with each other without knowing that they were doing so. This did not happen often, however. The Osmond Corporation made no attempt to disguise from customers its relations with the wholesale companies. Each of the companies issued its own catalog, but all made use of the same trade names, and the catalogs in fact resembled each other closely. Although most lumber and hardware retailers were aware of the relation existing between the companies, some preferred to deal with one company rather than with another. An executive of the corporation stated that price, delivery, service, and quality were the chief factors considered by purchasers.

The Montgomery and St. Louis companies had been in operation for more than 10 years. Originally they and a third company, located at Fort Worth, Texas, had been established by the Osmond Corporation to discourage possible competitors from entering those territories. It was believed that if two companies were soliciting orders in the same territory, even though one of those companies was owned by the other, competitors would be less likely to seek to enter the territory than they would be if only one of the companies was operating there.

Executives of the Osmond Corporation were of the opinion that the existence of the subsidiary companies had had some influence in discouraging competition. However, chiefly because of the duplication of effort involved in this plan, the corporation had made the Fort Worth company into a sales branch in 1927. This change made it possible for the company to release two salesmen from the Texas territory. Later the company opened a branch

at Galveston and placed several salesmen there; this, however, was done in order to provide more aggressive sales work in Texas and did not follow from the discontinuance of the Fort Worth company. The discontinuance of that company also eliminated substantial organization expenses for work that merely duplicated work of the main office.

Executives of the Osmond Corporation in July, 1928, had reached no decision as to the advisability of discontinuing the St. Louis and Montgomery companies and establishing wholesale branches there. It was anticipated, however, that this would be done. One objection raised was the possibility of disturbing established relationships with customers.

COMMENTARY: Little can be said in favor of a policy, like that adopted by the Osmond Corporation, of operating controlled distributing firms which are in competition with the manufacturer's own salesforce. If competitors are alert and have equally good or better products and equally low prices, they cannot be shut out of a lucrative market by such procedure. If the competitors are lethargic or do not have as good products or as low prices, it is unnecessary to take such steps to outstrip them in competition. It is naïve indeed to believe that competition can be throttled by buying control of distributors, at least unless it is done on a very large scale.

Real disadvantages exist, furthermore, when a manufacturing company operates controlled distributing firms which compete with its own salesmen. Such competition results in duplication of sales effort and expense and involves a risk that neither salesforce will manifest the same vim and resourcefulness that it would show if solely responsible for the company's sales in a particular territory.

November, 1928

M. T. C.



## BIGGERSTAFF ELECTRIC COMPANY<sup>1</sup>

### MANUFACTURER—ELECTRICAL WIRING DEVICES

#### DISTRIBUTION CHANNELS—*Direct Selling Combined with Use of Wholesalers.*

A company manufacturing electrical wiring devices had sold exclusively to selected wholesalers of electrical equipment for years. Because wholesalers were tending to shift their sales emphasis from products such as the company made to more expensive appliances, the company decided tentatively to take advantage of the opportunity offered by the rapid growth of the electrical field to sell directly to appliance manufacturers and industrial plants, while continuing to sell to, and increasing the number of, its wholesale distributors. The company employed a sales engineer to consult with manufacturing customers. It also maintained a salesforce, specialized by types of customers, to carry on missionary work in company with wholesalers' salesmen.

#### MERCHANDISING—*Maintenance of Quality in Face of Competition.* A company manufacturing electrical wiring devices was faced with the competition of inferior grades of product sold in chain stores. Although the company was uncertain whether to sell its products through chain stores, it decided in any event not to add a second grade of product to its line for that market.

#### MARKET COVERAGE—*Increase in Number of Distributors.* Because of an increase which had taken place in the number of wholesalers of electrical goods, a company manufacturing wiring items and other electrical devices decided to increase the number of its wholesale representatives as rapidly as possible.

(1928)

The Biggerstaff Electric Company, with annual sales in excess of \$10,000,000, manufactured more than 5,000 electric wiring items and other electric devices, such as sockets, plugs, switches, reflectors, and lamp guards. The company added new items to its lines continually; during the first three months of 1928, for instance, 200 new items were added. The company's products were of high quality, and most of them were patented; prices were comparable to those for similar items made by other reputable manufacturers.

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<sup>1</sup> Fictitious name.

In 1928, the Biggerstaff Electric Company, like other manufacturers of similar lines, was faced with several problems. One of these was whether to sell directly to appliance manufacturers using the items as fabricating parts, and to industrial plants buying the items as equipment. Another problem was whether to increase the number of distributors. And still another problem was whether to sell to chain store companies.

The company had sold exclusively to wholesalers of electrical equipment for years. It was, when the question of increasing the number of distributors arose, represented by about 430 such wholesalers. The company estimated that there were in the United States about 650 established wholesalers suitable for selling its line. Approximately 30% of the company's distributors sold only the Biggerstaff line. The remainder also handled one or more competing lines. The company had not given its distributors exclusive territories but had undertaken to protect each distributor from undue competition by restricting the number in any given territory. The chief market to which the wholesalers sold was that among electrical contractors and contractor-dealers. There was a large number of such contractors and dealers; usually they bought in small quantities and required quick delivery.

There also was a large market for certain of the company's products among railroads, textile mills, and other industrial plants requiring such equipment; the company made certain heavy-service items especially for that market. The company's distributors supplied that market also.

During the few years prior to 1928 another market for the company's products had grown rapidly. That was the market among manufacturers of electrical appliances requiring goods such as the company made for fabricating purposes. The requirements of these manufacturers were large; one such manufacturer, for instance, used 50,000 electric plugs a week. The Biggerstaff Electric Company in the first part of 1928 was reaching this market, with few exceptions, through its distributors rather than directly.

In addition to the change in the company's markets brought about by the growth in the electrical appliance industries, there were several other changes affecting the company's marketing program. One of these changes resulted from the growth of

small manufacturers of wiring devices who produced goods of inferior quality and who sold on a price basis, continually selling below the prices asked by the larger and established manufacturers. In many instances distributors for established lines had difficulty in meeting this price competition. The Biggerstaff Electric Company maintained a one-price policy and did not make variations in its prices to meet those of firms selling on a price basis. Sales of the company's distributors had not decreased with the growth of price competition, but the executives were of the opinion that they should have shown somewhat larger increases than they had.

Another change which had come about and which influenced the company's marketing situation was the increased attention paid by electrical wholesalers to large items such as electrical refrigerators and washing machines. The tendency was for the wholesalers to look upon the small, and highly competitive, items such as the company made, whose unit prices ranged from a few cents to a dollar or a dollar and a half, as incidental to the large items of equipment. The wholesalers' salesmen in many instances preferred to concentrate their efforts upon the larger and more profitable products.

This shift in the wholesalers' emphasis from the small wiring items and devices to the large appliances had led, an executive of the company stated, to the organization of many new, small wholesale firms concentrating upon the wiring items. A sales manager or salesman in a large wholesale firm, for example, would observe this shift in attention and would see an opportunity to organize a firm of his own to sell wiring devices.

The Biggerstaff Electric Company was represented by four manufacturers' representatives, three of whom carried consigned stocks and one of whom bought outright from the company. Each of these representatives maintained a salesforce to call upon wholesalers. The company also had 56 salesmen. These salesmen spent about one-third of their time in missionary work with the wholesalers' salesmen. The company deemed this work necessary; an executive stated in 1928 that the amount of such work required constantly was increasing. Each salesman was a specialist in a certain field. Some of the salesmen, for example, called only upon architects; others called only upon contractors; and still others called only upon manufacturers. An executive of the company stated that it was necessary for all the salesmen



to have technical training and that he did not think one market in general presented more difficult problems than another. Ninety per cent of the appliance manufacturers' purchases of Biggerstaff products, for example, were of standard items, and only 10% were of special-order goods. The executives were of the opinion, however, that a salesman who concentrated upon one type of market rather than upon several had an advantage in selling in that market. The salesmen were paid salaries, commissions, and bonuses.

In addition to its salesmen, the company recently had employed a field engineer to consult with manufacturers who had engineering problems to meet in connection with the use of such products as it made. This service had proved to be the means of obtaining much profitable business.

In the early part of 1928 the Biggerstaff Electric Company was making all but about 3% of its total sales through its wholesale distributors. The company estimated, however, that the market for its products among appliance manufacturers and industrial plants buying the items as equipment should comprise 50% of its total sales. To sell directly to this market would not, in the company's opinion, require an increase of more than 10% in the salesforce. Many manufacturers, the company stated, preferred to buy directly. The purchases of a manufacturer customarily were at least as large as those of a wholesaler.

The Biggerstaff Electric Company never had sold to chain store companies. The chain stores which constituted the chief market for wiring devices were such stores as Kresge's and Woolworth's. Chain stores of that type, a representative of the company stated, ordinarily sold cheap grades of goods and the company had feared injury to the quality reputation it had established for its products if those products were sold in such stores under the Biggerstaff name. It was possible, furthermore, that the wholesalers would object to selling the line if it also was sold in chain stores.

Chain stores would not afford a market for the company's full line. They handled only sockets and such other items as consumers readily could make use of without elaborate installation. The company estimated, however, that chain stores companies comprised a market for from 1,000,000 to 1,500,000 sockets alone in a year. The increased production which sales to chain store

companies probably would make possible would reduce the company's unit production costs sufficiently to enable it to sell its regular line, simplified perhaps, at prices sufficiently low to meet the requirements of the chain stores.

It was suggested, however, that if the company sold to chain store companies it might be advisable for it to develop a second quality of products especially for that trade. This would meet any objections the wholesalers might have to the company's permitting the lines which they handled also to be handled by chain stores. This proposal was not deemed satisfactory, however, because of the possibility of the cheaper line's interfering with sales of the main line. It seemed likely that, if the company put a cheaper line on the market, the wholesalers would wish to handle that line rather than the more expensive line.

In addition to the missionary work which it did, the company advertised widely in trade papers and directly by mail. It also provided dealer helps for its distributors.

The Biggerstaff Electric Company decided to increase the number of its wholesale distributors as rapidly as possible; it would not sell to price cutters, to firms whose credit was poor, or to firms which for any other reason it did not deem suitable distributors for the Biggerstaff line. In the five months following this decision the company increased the number of its distributors by 35.

The company further tentatively decided to sell directly to appliance manufacturers and industrial plants.

The company had reached no decision as to whether to sell to chain store companies. It had decided, however, that it would not add a second grade of product to its line for that trade. Any products which it sold to chain store companies would be of its usual high quality and would be sold under the Biggerstaff name.

COMMENTARY: The Biggerstaff Electric Company was in the process of readjusting its plans of distribution to changed conditions, brought about by the enhanced importance of the industrial market, the expansion of chain stores, and the diversification of the lines of electrical merchandise.

The company's tentative decision to sell directly to large fabricators and industrial plants was inevitable. Despite the reluctance of wholesalers to acquiesce in such a change, they could not usually show sufficiently strong economic reasons against it to deter the manu-

facturing company from such a decision. The orders placed by fabricators and large industrial plants were as great in magnitude as many of the orders placed by wholesalers. Hence they could be handled as economically in direct sale as in sale to wholesalers. The Biggerstaff Electric Company, furthermore, had been impelled to employ missionary salesmen so extensively that only a 10% increase in the sales-force, it was estimated, would be required to handle the industrial sales directly. As has been pointed out in the commentaries on other cases,<sup>2</sup> when a manufacturing company deems it necessary to employ missionary salesmen extensively for the routine solicitation of orders, the duplication of selling expense is almost certain to be so heavy a burden as to lead eventually to direct sale. This was true in the case of the Biggerstaff Electric Company.

The chain store problem was presenting itself to this company in much the same manner as to numerous other manufacturing companies. The chain store companies had a potential volume of sales that made them a real factor in the market. If the Biggerstaff Electric Company did not sell to the reputable chain store companies, other manufacturers would and the Biggerstaff Electric Company would lose a potential market, with no gain to the wholesalers whom it was seeking to protect. The sales of widely advertised products in chain stores were increasing and the Biggerstaff Electric Company and its wholesale distributors were powerless to check the growth of chain stores by disregarding them. The decision of the Biggerstaff Electric Company not to sell a second grade product to the chain store companies was sound, for such action merely would have intensified price competition with its standard products and would have served no really useful purpose.

The efforts of the company to sell its products to a larger number of wholesalers indicated a recognition of the changed conditions in the wholesale trade in electrical goods. The large electrical wholesalers had come to be interested chiefly in the sale of appliances and large equipment items, which called for more highly trained salesmen than were needed for selling wiring devices, and the market for appliances and large equipment items was substantially different from the market for wiring devices. Hence those large electrical wholesalers could not afford to give attention to the sale of wiring devices in small lots to many small contractors and dealers. A new group of wholesalers had arisen to handle that market.

The growth of the electrical industry, the diversification of electrical products, and the spread of chain stores were resulting in a realignment of the wholesale market which necessitated changes in the methods of

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<sup>2</sup> See Homer Food Company, 5 H.B.R. 511; Nyanza Company, 5 H.B.R. 454; Sussex Company, 5 H.B.R. 460; Merritan Company, 5 H.B.R. 470; Tansey Supplies Company, 6 H.B.R. 290.



wholesale distribution by a company such as the Biggerstaff Electric Company. The questions raised in this case were of a broad, general nature, and the decisions on these cases involved a series of detailed but vital problems not stated here, such as the determination of the limits of the industrial market in which the company should seek to sell direct and the minimum size of order to be accepted.

May, 1928

M. T. C.

## KEATS TOOL COMPANY<sup>1</sup>

### MANUFACTURER—TOOLS

**DISTRIBUTION CHANNELS**—*Direct Sale to Users and Retailers Combined with Sales to Wholesalers.* A company which had been manufacturing tools for a long period found its original markets declining. To offset this condition, old items were modified and new lines were added, with the consequence that the company's plan of distribution through wholesalers proved unsatisfactory, since the wholesalers were disinclined to add new products until the demand had become evident. A test of direct solicitation of orders from users and retailers proved so successful that a combined sales policy was adopted. Sales were made directly to users and retailers, and also to wholesalers.

(1921-1927)

Until 1921 the Keats Tool Company had made all its sales to wholesalers and supply firms. At that time it was proposed that the company, in addition to selling to wholesalers, should sell also directly to large users and to retailers.

The Keats Tool Company was an old firm whose original markets had declined so that it had become necessary for the company, in order to maintain its sales volume, to modify and add to its line. The new products that were added in several instances raised questions as to channels of distribution and methods of sales promotion.

In 1921, the company's chief products were American pattern files, rasps, chisels, punches, pliers, tongs, separator knives, and special files for smoothing metal surfaces before paint was applied. These special files had been introduced in 1917. They were patented and were sold under the trade name *Amazon*. In addition to these tools, the company made a complete line of tool steel. Ninety-nine per cent of this was sold to jobbers, and this line was not included in the general proposal to sell directly to users and to retailers.

The chief market for the Amazon files was the automobile industry, both manufacturers and shops making repairs. The files, however, were useful wherever there were metal surfaces to be

<sup>1</sup> Fictitious name.

smoothed. An executive of the company stated that all industrial plants were using Keats tools or similar tools sold by the company's competitors.

The wholesale price of the company's Amazon files was approximately \$15 per dozen, while the average price of American pattern files was \$2 to \$2.50 a dozen. Prices of other Keats tools varied widely but none cost more than a few dollars each. The average unit order placed by wholesalers for files was one gross. Large manufacturers using the files bought from 50 dozen to 200 dozen in a single order.

The company always had sold its products to wholesalers, and, when it entered new markets, it had followed the same policy. As the company modified and added to its line, a larger number of distributors became necessary, as well as distributors of a somewhat different type from those to whom it had sold its blacksmiths' tools. Distributors to whom the company was selling in 1921 were hardware wholesalers, automobile accessory wholesalers, and supply firms serving various types of industries. The company did not grant exclusive sales territories to its distributors. On the contrary, it sold to as many distributors as possible. The company in 1921 was doing no advertising or missionary work to assist its distributors.

The issue as to whether the company should sell directly to retailers and users was precipitated by difficulty which the company had in securing wholesaler representation in several large industrial territories. The wholesalers were disinclined to add Keats products to their lines until a demand for them had become evident. When this situation arose, the company solicited orders directly from users, and, in some cases, from retailers. This direct solicitation proved so effective in increasing sales that the company considered following the same policy in other territories. The sales manager's experience with use of wholesalers, moreover, led him to believe that in most instances the wholesalers did not aggressively seek orders for Keats tools but merely filled such orders as were received. The Amazon files in particular required aggressive sales efforts in view of the fact that they were six to eight times as expensive as American pattern and other files that could be used, although less effectively, for the same purposes.

Changes that were taking place in the wholesale hardware trade, the sales manager stated, influenced the company to sell



directly to retailers. That executive pointed out that the number of wholesale hardware firms was decreasing; that many of them were opening retail departments; and that hardware retailers in numerous instances were opening automobile accessory departments.

The Keats Tool Company decided to sell directly to users and to retailers. Users and retailers that purchased as large quantities of Keats goods as were purchased by the larger wholesalers would be given the same discounts that were allowed to the wholesalers; other users and retailers buying directly would pay the same prices that they would pay if buying through the usual channels. This plan of direct sale did not apply to the South, however, since users and retailers in that territory appeared to prefer to buy from wholesalers.

In 1928, about half the company's sales were of American pattern files, about 20% of Amazon files, about 20% of tool steel, and about 10% of the other tools. Of the sales of American pattern files, between 30% and 35% were made directly to users; between 35% and 40% to wholesalers; and the remainder to large retailers. Of the sales of Amazon files, from 66 $\frac{2}{3}$ % to 75% were made directly to users; about 20% to wholesalers; and the remainder to retailers. Most of the company's customers placed orders for Keats tools about once every two months.

The sales manager of the company stated that quick deliveries to users were important in the case of Keats goods. The company maintained stocks in seven cities. In Detroit the company had stocks valued at approximately \$35,000; in San Francisco it had about \$15,000 worth of stocks; and in each of five other places it had about \$7,500 in stocks. The company's stocks had not been increased appreciably as a result of direct sales to retailers and users. Before it began to sell directly the company had carried stocks at only two points. When it changed its distribution plan it simply placed part of the stocks it normally carried at those two places in five other industrial centers.

The company had no definite requirements as to size of distributors' orders. It expected distributors to place orders that were reasonable with reference to their natural requirements, and when this was done it gave the same discounts to small distributors that it gave to large ones. On new accounts opened with the company by wholesalers or retailers the full wholesale or retail

discount was not granted unless the distributors placed what the company deemed reasonable orders.

In 1928 the company had 11 salesmen. One salesman had Cleveland for his territory; another had Detroit; another had New York City; another had Philadelphia; and each of the others had large territories comprising several states. The two salesmen in Cleveland and Detroit made about 85% of the company's total sales of files. All the salesmen sold the complete line and visited large users as well as distributors.

In addition to the 11 salesmen, the company had 3 so-called "practical men," who could be called upon by the salesmen to demonstrate the files or other tools to users. When those men were not engaged in such work with users they were employed at the factory.

In 1927 the company made a further addition to its line in the form of a universal wrench. The new wrenches were patented and, in the company's opinion as well as in the expressed opinion of many users, they incorporated features that gave them a decided superiority to other types of wrenches. Prices of the wrenches were \$1 to \$4, the amount depending upon the size of the wrenches. There was a large potential market for the wrenches both for household and for industrial use.

Although the new Keats wrenches were thought to have outstanding advantages, the reaction of wholesalers to whom they were introduced, it was stated, tended to be, "Oh, just another trick wrench." Wholesalers and retailers were reluctant to stock them until a demand had been created by the manufacturer.

In view of this reluctance on the part of distributors, the company decided that it would be necessary to advertise the wrenches. The company decided to experiment with direct-mail circulars. Different circulars were to be used for retailers and for users. The company also planned to arrange with retailers to have Keats wrenches featured in window displays.

In addition to these methods of creating a demand for its wrenches, the company was instrumental in securing agents who would buy the wrenches outright from wholesalers at the list prices to retailers and solicit orders directly from industrial users.

The company sold its wrenches, as it did its other tools, to wholesalers and directly to large retailers and users. The sales manager stated that no complaints had been received from whole-

salers as a result of this practice except from wholesalers in the South, where the company had made a few sales directly to retailers. Nor was the company troubled with price cutting on its products.

The sales manager of the company was convinced that the company's policy of selling directly to retailers and users as well as to wholesalers had resulted in stimulating demand and in increasing sales of Keats merchandise. A strong demand had been created for the Amazon files, for example, so that distributors now were eager to stock them.

The company had decided to concentrate its sales effort upon the Amazon files and the universal wrenches. Those products were distinctive so that a specialized demand might be created for them. The company's patents on the Amazon files would expire in 1931, and after that time it was anticipated that other manufacturers would begin to make similar files. To establish its product firmly before this happened, the company expected to increase the amount of advertising done. It also expected to continue its existing plan of distribution.

COMMENTARY: In changing its channels of distribution to include sales to large users and large retailers as well as to wholesalers and supply firms, the Keats Tool Company was adopting the same course that numerous other manufacturers have found it necessary to follow, in order to avoid having its merchandising and sales promotion program blocked. Inasmuch as the company granted the wholesalers' discounts only to users and retailers who bought in as large quantities as wholesalers bought, the wholesalers had no serious ground for complaint. It would be interesting to have data, however, to show how the company's selling expense was affected by the change in policy.

January, 1929

M. T. C.



## BARNABY MACHINE TOOL COMPANY<sup>1</sup>

### MANUFACTURER—MACHINE TOOLS

**DISTRIBUTION CHANNELS**—*Selection of Distributors for New Product.* When a company distributing its machine tools through branch offices and machinery dealers added portable electric saws to its line in order to smooth out sales peaks and increase sales volume, it decided to market the saws through a new set of distributors selected from among contractors and railroad and mine supply firms, granting exclusive territories where feasible. Several men were employed as missionary salesmen to visit large prospective users and to assist in selecting distributors.

**MERCHANDISING**—*Addition of New Product to Line.* A company manufacturing machine tools decided to add portable electric saws to its line. Not only were the saws judged to have great intrinsic merit, but it also was anticipated that they would tend to smooth out peaks in the company's sales.

(1927)

Early in 1927 the Barnaby Machine Tool Company had an opportunity to add to its line a patented portable sawing machine operated by electricity. The inventor of the machine had no marketing organization and the machine was entirely unknown to potential users. If the company decided to manufacture and market the product, it also would have to decide upon methods of distribution.

The Barnaby Machine Tool Company manufactured lathes, radial drills, vertical millers, planers, production milling cutters, and various special machine tools, all of high quality. Annual sales were approximately \$750,000. At one time the company had maintained its own sales offices in the leading industrial cities in the United States and had made most of its sales directly to users. By 1927, however, the company, because of what it deemed excessive sales expense, had discontinued all but two of its sales branches. Those two branches made about half the company's total sales. Except in the territories of the branches, the company distributed its products through machinery dealers,

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<sup>1</sup> Fictitious name.

some of which had exclusive sales territories and purchased the machinery outright and some of which did not have exclusive territories and sold on a commission basis. The discounts or commissions that the company allowed the distributors in most cases amounted to about  $12\frac{1}{2}\%$  of sales. The distributors carried wide lines of machinery.

Barnaby products were used chiefly by large manufacturing companies. The products, although incorporating distinctive features, were of types well known to users and hence seldom needed demonstration. They were technical in nature and were sold on a performance basis; nevertheless the company was of the opinion that distributors' salesmen were competent to sell them.

The sawing machines which the company had an opportunity to manufacture and market were designed to replace hand cross-cut saws. There was nothing comparable to them on the market. Tests convinced the company that one of the portable electric saws, operated by two men, could accomplish in a given time at least five times as much as a hand cross-cut saw, also operated by two men. The company recognized that some developmental work still remained to be done on the electric saws but was satisfied that they could be made completely satisfactory in use. The sawing machines were compact and were light enough to be handled easily by the operators. All that it was necessary for the operators using one of the saws to do was to guide it as it cut. No stroke was necessary, and hence the electric saws could be used in confined spaces where hand cross-cut saws could not be used. This was an advantage particularly in construction work. The saw teeth were the only part of the machines that was subject to severe wear and they were so constructed and attached to the machines that they readily could be removed and replaced with others. To allow the company a reasonable gross margin, the saws probably would have to be priced at \$500 to \$600 each. Barnaby machine tools were sold for from \$1,000 to several thousand dollars each.

The Barnaby Machine Tool Company did not make a market survey to determine the potential demand for the saws. Another company, however, previously had undertaken to manufacture the portable saws and that company submitted a statement respecting potential markets to the Barnaby Machine Tool Company. This other company had been forced to discontinue its

effort to produce the saws because it was not equipped to manufacture the parts to the required tolerances. A copy of the market estimate drawn up by this company and submitted to the Barnaby Machine Tool Company follows.

Going into the matter of prospects for the portable sawing machine, we find some data which, while interesting, prove that there is an enormous field in which the machine can be used.

According to statistics, there are approximately 14,489 mines in the United States. It is safe to assume that one-half of these, or 5,000, use timber of some description. Mine timber shipments for this country run into thousands of carloads every year. When it is realized that many of these mines are lined completely with timber, the extent of timber usage in such work is seen clearly. In the May issue of *THE TIMBERMAN*, pages 60 and 62, is an interesting description of this work as it is carried on in Wales. The article also is applicable entirely to the United States. Some idea of the extensiveness of timber usage in mines of this country may be gained when considering that in 1915 approximately 5,000 of these mines consumed 2,500,000,000 board feet of round and sawed timber.

It is a conservative estimate that mines in Canada and South America using timber number as many as in our country. Therefore the total number of mines in the two American continents using timber of some description is approximately 10,000. As a result there are in these countries 10,000 mines which could use the portable saws.

Coming to the pulpwood industry, statistics tell us that Canada cuts approximately 2,180,570 cords of pulpwood annually, while the United States cuts 4,500,000 cords per year. The total yearly cut for America therefore approximates 6,680,570 cords of pulpwood. One half of this amount is from trees ranging from 8 to 16 inches, which is within the scope of the saws. Assuming that two men with one of the portable saws could cut 20 cords per day, 835 machines could be used continuously in this industry. If this number would be used continuously, it is safe to assume that there would have to be twice that number, or 1,670, in the field. It is a common practice in the pulpwood industry to fell trees and then cut them up into cordwood lengths after they are yarded. Under these conditions the application of our machines would be ideal as they would not have to be carried around in the woods.

The logging railroads furnish a good market for the saws as there is a tremendous amount of timber used. According to a master list of lists there are 505 logging railroads in the United States. Many of these are being abandoned continually and the rails moved to other locations, thus making necessary new timber structures. It is reasonable to estimate that at least four saws could be used by each of these railroads, making a total of 2,020 machines. At the present time the  
————— Lumber Company is building 44 trestle bridges in the state



of Washington. The largest of these trestles will be 1,700 feet long. It is likely that 20 of the saws could be used to advantage on this job.

The mileage of steam railroads in the two American Continents at present is approximately 390,000 according to statistics. Ordinarily there is a crew of some description for maintenance and repairs of these roads every 200 miles. Sometimes it is every 50 or 100 miles. Figuring a crew every 200 miles, however, there would be approximately 2,000 crews which could use as many portable saws. This number would be used for maintenance and repairs only to say nothing of those that could be used in the building of new roads.

We have not even attempted to estimate the number of saws which probably would be used in cutting the some 70,000,000 cords of firewood consumed annually by the United States.

Of the some 15,000 sawmills in the United States and Canada it is a low estimate to say that one-half of these are of sufficient magnitude to warrant the use of the portable saws not only for use in trimming timbers, etc., but also for maintenance, repairs, and extensions which are going on continually since the depreciation of a sawmill is extremely great. Therefore at least 7,500 of the portable saws could be used in sawmills of North America. Some establishments, of course, would use more than one.

In the general construction industry, of which thus far we have said nothing, there are approximately

660 railroad contractors

440 bridge contractors

12,881 general contractors (exclusive of the some 22,445 building contractors)

and 349 pile driving and dock contractors, making a total of 14,330 prospects for the saws in the general construction industry of the United States.

In addition to this there are 15,465 retail lumber and timber yards in North America, many of which are prospects. It is safe to assume that 10 per cent of these trim and ship timber. Hence, at a conservative estimate, there would be a market for 1,500 saws in lumber and timber yards.

Five million poles are used annually in the United States by telegraph, telephone, and light companies. In the manufacture of these poles, the producer makes them, yards them and ships them to the middleman or dealer. He, in turn, sells them to the user. The producer, middleman and user all do more or less cutting on these poles and therefore all could use the portable saws. The producer would be a big user because his poles require trimming and grading before shipping. Also he cuts timber unsuitable for poles into posts, of which billions are used. The middleman also maintains a storage yard and he will use the portable saws for trimming and regrading. Finally, the user maintains yards and he could use the saws for fitting poles prior to installation. In the absence of statistics but considering that 5,000,000 poles are used annually, we feel that it is safe to estimate that there

are at least 1,000 establishments which could use the portable saws for the purposes heretofore stated.

To what extent the saws could be used in cutting the billions of fence posts in the United States (cut from trees within the capacity of our machine) is beyond calculation.

Tabulated, the results of the foregoing would be as follows:

10,000	Mine Prospects in North and South America
1,670	Prospects in Pulpwood Industry in North America
2,020	“ “ Logging railroads in United States
2,000	“ “ Steam railroads in North & South America
7,500	“ “ Sawmills in North America
14,330	“ “ General construction industry in U. S.
1,500	“ “ Timber and lumber yards in N. America
1,000	“ for poles
<b>TOTAL</b>	<b>40,020</b>

That the above reasoning is not fallacious is borne out by the fact that three of our leading manufacturers turn out, in a conservative estimate, 500,000 hand cross cut saws annually. This is reasonable since in their Chicago plant alone ——— turns out approximately one-quarter of a million and there are some 60 similar establishments in this country. Very likely one-half of this number could be replaced with our 2 foot saw, or 250,000. Assuming that one of our saws would replace four of these hand saws, the total of machines which could be used comes to 62,000.

The Barnaby Machine Tool Company was interested in the new product not only because the product was suited to manufacture in its plant and appeared to provide a real improvement over existing methods of sawing timbers and other wooden pieces, but also because it was thought that sales of the sawing machines might serve to smooth out peaks in the company's sales, as well as to increase the total sales volume. An executive of the company stated that sales of machine tools tended to vary with general business conditions. As far as the saws were concerned, he anticipated that there would be seasonal peaks in sales.

The company decided to add the new product to its line. It appointed a man to act as sales manager for the saws. Manufacturing and sales costs for the saws were to be kept entirely separately from costs for the machine tools, and the saw department was to be charged with a proportionate share of the overhead. The company's problem then was to market the saws. Planned sales were 200 saws annually during the first few years that they were on the market.

It was at once apparent that the machinery dealers representing the company were not suitable distributors for the new line.

Those firms sold chiefly to manufacturing companies and machine shops and had few contacts with the important markets for the portable saws. The company either could sell the saws directly to users by means of its own salesmen or it could select suitable distributors and undertake to have them represent the line.

The company decided to make use of distributors. It was thought that the machines were sufficiently simple in construction and operation to make it possible for distributors' salesmen to sell them effectively. The company did not deem the unit of sale or the probable sales volume large enough to justify a plan of direct sale. Distributors also could carry stocks of repair parts and might carry stocks of the machines. The company anticipated that quick delivery would be important in sale of the machines to building contractors and perhaps to other prospective users.

It soon became apparent that the company would have to do some introductory sales work with prospective users even though it planned to sell through distributors. The saws were such an improvement over any previously in use that it was difficult without demonstration to convince prospective users that they would do what was claimed for them. Demonstration was needed to prove performance facts rather than for instructing operators in use of the machines. Distributors also were reluctant to add the machines to their lines until there was some demand for them.

The company decided to employ two or three men to visit large prospective users throughout the United States and to demonstrate the saws. These men also were expected to obtain suitable distributors for the saws. Contractors' supply firms and railroad and mine supply firms were deemed suitable representatives for the line. The company would grant exclusive sales territories to distributors that it believed would be aggressive in selling its saws, and such distributors would be credited with all orders from their territories. To other distributors it would not grant exclusive territories, although it planned to have only one distributor in any territory. The company wished each of its distributors for the saws to keep one saw in stock for demonstration.

The company also decided to advertise its saws in a magazine read by engineers and contractors, in a railroad trade paper, in a trade journal for coal mines, and in another journal for metal



mines. In that advertising actual performance records of the sawing machines would be stressed.

During 1927 the company sold about 50 of the sawing machines and during the first half of 1928 it sold 100 of the machines. Demonstration was required for many of the sales made in 1927. By 1928, however, enough machines were in use to familiarize prospective customers with them in a large number of instances. As a result of information secured through demonstrations of the machines, the company was able to make various improvements in them. Originally they had been able to operate by alternating current only. Later, however, in view of the demand for them where that current was not available, the company developed direct current and air motor drives.

By the middle of 1928 the company had about 30 distributors for its saws. Among this number were several distributors who specialized in the sale of railroad equipment. Others were contractors' supply firms and mine supply firms. Most of the distributors had exclusive territories and were billed directly by the company. A few did not have exclusive territories and, in some instances, the company billed the customers rather than the distributors. The company deemed it advisable to use distributors with exclusive territories in so far as possible; in fact, most of the more desirable distributors were unwilling to handle the line unless they were granted exclusive territories. Few of the company's distributors carried stocks of the sawing machines. The distributors were allowed a discount of 15% to 20% from the price to users. The company did not expect to continue sending its own salesmen to users.

In July, 1928, an executive of the Barnaby Machine Tool Company, on the basis of the company's experience in selling the portable saws, made the following statement with reference to the markets for the saws.

It has been our experience that the survey submitted to us by the ——— Company was considerably overdrawn and that not all of the fields listed are possible prospects.

There are many limiting factors governing the sale of this machine, which evidently were not apparent to the ——— Company. One of these factors is that difference in electric current used throughout the country, and on which there seems to be no standard. Our machine is regularly supplied with 110 or 220 volts 60 cycle 3 phase, whereas in some sections they have only D. C.

current, and in other sections A. C. current of 25 cycles, 40 cycles, 50 cycles, etc. Motors of 25 or 40 cycles are not suitable for the service required, neither can a single phase motor be used. It was to meet this condition that we brought out the D. C. machine and the air driven machine. The latter seems to indicate attractive possibilities among the railroads and contractors, who naturally have not electric current available.

COMMENTARY: Four points are noteworthy in the experience of the Barnaby Machine Tool Company in placing a portable electric saw on the market. In the first place, the need for first-hand study of the market, before offering such an article for sale, is shown by the deficiencies of the market statement furnished to the Barnaby Machine Tool Company by the company that previously attempted to sell the machine. Secondly, as the Barnaby Machine Tool Company recognized at the outset, the market for the new machine was so different from the market for the other machines made by the company that a separate sales division was needed. In the third place, the unit value of the machine, its newness, and the consequent sales promotion required warranted the granting of exclusive territorial franchises to distributors. The last point was that since the machine was of an entirely new type and could be sold only by supplanting traditional methods, missionary sales work was essential at the outset to obtain the initial installations and thereby start a sales momentum that would carry along the distributors.

November, 1928

M. T. C.

## SARDOU TOOL COMPANY<sup>1</sup>

### MANUFACTURER—MACHINE TOOL ACCESSORY

DISTRIBUTION CHANNELS—*Use of Exclusive Distributors.* A company which manufactured an accessory for machine tools decided to reach the segment of its market that was represented by machine tool users through supply firms to whom it would grant exclusive sales territories. Sales to manufacturers of machine tools would be made directly by the company.  
(1922-1928)

The Sardou Tool Company manufactured a small tool, in a large number of types and sizes, that served as an accessory to machine tools. Sardou tools ranged in price from \$25 each to \$1,000 each; by far the largest number of the tools that the company sold, however, were in the price range of \$25 to \$75 each. Prior to 1922 the sales work of the company very largely had been carried on by one executive. This executive had followed no consistent distribution plan. In 1922 he retired and the company undertook to develop a plan for the distribution of its tools. One of the questions to be decided was whether the company should grant exclusive sales territories to distributors.

There were in the United States not more than six important manufacturers of the particular type of machine tool accessory that the Sardou Tool Company made. The tools made by all these manufacturers, while differing in details, were essentially alike. The market for Sardou tools was among manufacturers of machine tools, who in many instances equipped their products with this accessory, and among users of machine tools, all of whom were potential buyers of replacements or additional tools.

The executive who took charge of sales in 1922 decided that the company's line, except in the case of sales to machine tool manufacturers, was suited to distribution through supply firms handling allied items. There was a large number of widely scattered users of machine tools; their orders commonly were comparatively small; and promptness in delivery was important. Manufacturers of machine tools, on the other hand, bought in

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<sup>1</sup> Fictitious name.



large quantities and ordinarily preferred to buy directly from the manufacturers of the accessories. This sales executive also decided that exclusive sales territories should be granted to selected distributors reaching the market among machine tool users. Exclusive arrangements were expected to insure the distributors' interest in the line and to restrict price cutting.

The company opened three branch offices in 1922. In charge of each office was a man who, in addition to the Sardou tools, sold other lines. The offices were held in the company's name, and the company controlled the selection of the additional lines to be sold. The company in 1922 also undertook to find exclusive distributors for its products. By 1928 it had 10 such distributors. These distributors sold small tools, gauges, taps, dies, and similar items. The exclusive distributors customarily carried stocks of Sardou tools amounting to from \$1,000 to \$2,000 each. This enabled them to make deliveries of some of the commonest sizes and types from stocks. The territories of the exclusive distributors did not cover the entire United States, for in some places the company was unable to find satisfactory exclusive distributors. In territories where it had no exclusive representatives the company sold directly to machine tool users and also to any reputable distributors that wished to buy. Even in those territories, however, it sold to users at prices higher than those given distributors, in order to protect the distributors. In the exclusive territories the company accepted orders directly from machine tool users but it billed the orders through its distributors. Orders from machine tool manufacturers, however, were filled directly, without credit to the exclusive distributors, unless those distributors were directly responsible for the orders.

In addition to the salesmen representing it at the branch offices, the company had three salesmen who devoted their full time to its own products. These men visited machine tool manufacturers and distributors. One of them spent a large part of his time calling with distributors' salesmen upon machine tool users. For the most satisfactory work with its products the company was of the opinion that the salesmen needed to have shop or engineering experience. In some instances distributors' salesmen had inadequate technical training. In selling the tools it was customarily necessary for the salesmen to visit master mechanics, plant engineers, and tool foremen.

The company advertised its machine tool accessory in a few trade papers. Most of its advertising of that item, however, was done directly by mail. In its advertising to machine tool users, the company referred readers to its distributors.

The company was satisfied with its plan of exclusive distributors. Use of exclusive distributors, in the company's opinion, served to prevent serious price cutting. Nor did it unduly restrict the number of wholesale outlets. An executive of the company stated that supply firms located in the territories of the exclusive distributors commonly worked as hard to sell Sardou tools as those distributors did. Under such circumstances, the exclusive distributors resold to the non-exclusive distributors at a discount somewhat less than that which they received from the company. The company also deemed it more economical to sell through distributors than to sell directly to users.

COMMENTARY: The first point to be noted in this case is the company's action in segregating its market, so that tools to be utilized as fabricating parts were sold directly to machine tool makers and tools for sale as accessory equipment were distributed to users by supply firms. By granting exclusive franchises to selected supply firms, the company succeeded in avoiding the embarrassments of price cutting. The statement, however, that supply firms which held no agency commonly worked as hard to sell Sardou tools as did the distributors from whom the supply firms bought suggests that the distributors holding exclusive franchises were either lax in selling Sardou tools or unable to provide thorough coverage of their markets.

If the exclusive distributors were able and disposed to provide thorough coverage, they should have had no occasion to resell substantial quantities of Sardou tools to other supply firms. If they could not provide practically complete coverage of the potential markets in their respective territories, then the granting of exclusive franchises was not warranted.

October, 1928

M. T. C.

## DURAN MACHINERY COMPANY<sup>1</sup>

### MANUFACTURER—MACHINE TOOLS

**MARKET COVERAGE**—*Plan of Exclusive Distribution Replaced by Dense Distribution.* A company manufacturing standard and special machine tools sold them through machinery merchants with exclusive territorial franchises. In order to secure a more complete market coverage, the company decided to discontinue the exclusive territories and to permit any reputable machinery merchant to sell the machines. Coincidentally with this change, the company increased its trade paper advertising and changed the appeals used.

(1927)

Prior to the latter part of 1927 the machines manufactured by the Duran Machinery Company had been sold on a commission basis by machinery merchants with exclusive sales territories. Late in 1927, however, it was proposed that the exclusive territorial arrangements should be discontinued and that any reputable machinery merchant should be permitted to sell the machines.

The Duran Machinery Company manufactured two standard types of machines, a threading lathe and a planer. Sales of these standard machines, however, constituted only a small portion of the company's total sales and the company had decided to concentrate its sales efforts upon the special types of machines that it manufactured. In 1927 the company was making six special types of machines; it added new machines from time to time and constantly was engaged in developmental work. The standard machines, while having distinctive features, were essentially the same as machines made by various other manufacturers. The special machines, on the other hand, had no direct competition. They were automatic, high-production machines and replaced hand work or semiautomatic machinery. Their initial unit cost ranged from \$2,000 to \$10,000. The chief selling point for the machines was the reduction they made possible in unit production costs. In one instance, for example, a Duran machine

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<sup>1</sup> Fictitious name.



had reduced the unit costs of manufactured parts from 11 cents each to 2 cents each.

One of the most important of the special types of Duran machines was a boring machine which performed at the same time three operations that customarily were performed separately. This boring machine was used by large manufacturers, such as automobile companies, making metal parts that required boring. Another special type of machine made by the company was an automatic profiler. The company also had developed a machine for performing certain operations on rubber heels that previously had been done by hand.

Sometimes manufacturers, knowing the company's reputation for making automatic machinery for special purposes, asked the company to develop machines to meet their needs. In other instances the company itself discovered new applications for automatic machinery. When it developed a new type of machine, the company estimated the potential market for the machine and on that basis distributed a proportionate share of the cost of development to each machine sold. In general, the market for the company's machine was among manufacturers who produced parts in large enough quantities to make use of automatic machinery practicable and to whom a saving in unit production costs was of sufficient importance to justify the initial investment. Machinery manufacturers formed the largest single market. The company's sales volume varied quite widely from year to year. Sales in 1927 amounted to \$500,000. In some years they were twice that large.

Prior to 1927 the company had not been aggressive in its sales efforts. Small advertisements, of a semi-institutional type, had been placed in leading machinery papers and a little direct mail advertising had been done. In each trade area the company was represented by a machinery merchant with exclusive territorial rights. These representatives carried no stocks of Duran special machines but in some instances they did have stocks of the standard machines. The machinery merchants sold machine tools; their total stocks ranged from \$50,000 each to \$1,000,000 each. They sold the company's special machines on a commission basis. The company referred all inquiries to its representatives and on any sales which it made directly the representatives received a commission.

The part of an exclusive representative in the sale of a Duran machine typically was as follows. A salesman of the representative in calling upon a customer would notice some operation which might be performed on a Duran machine. The salesman then would tell the production engineer, superintendent, or factory manager in the customer's organization about the company's machines and would offer to obtain definite information as to costs and production time. If the engineer or other person seen was interested, he would give the salesman blue prints and other data relative to the operation. The salesman then would send this information to the Duran Company and the company would furnish the sales representative with a quotation, giving initial cost and operating time per unit produced. The company made a guaranty directly to the purchaser concerning the operating time quoted. The representative's salesman then submitted the company's proposal to the prospective customer and if possible secured an order. Installation service was not required; nor did the machines call for maintenance service. The sales manager of the Duran Machinery Company stated that the exclusive distributors seldom showed much initiative in selling Duran machines for new applications; usually they simply solicited orders for applications to which the machines already had been put.

Late in 1927 the sales manager recommended that the exclusive arrangements with the company's distributors be discontinued. The agency contracts were so worded that this could be done. It was the sales manager's opinion that the exclusive agency arrangements resulted in loss of sales. In the first place, he stated, no one machinery merchant or supply firm in any territory had access to all the potential users of Duran machines in the territory. Some firms customarily bought all their machinery requirements from a single merchant. Personal relationships sometimes were factors also. There had been instances in which manufacturers had refused to purchase Duran machines from the company's exclusive representatives. Salesmen of machinery wholesalers which did not have agencies for Duran machines, moreover, tended to discourage purchase of them by their customers. An engineer or production manager who had seen some of the Duran Machinery Company's advertising might ask a salesman of the machinery merchant from whom his firm ordinarily

bought about the machines; if that distributing firm was not permitted to sell Duran machines, the salesman was likely to give unfavorable reports of them. Also, the Duran Machinery Company not infrequently was asked by distributors without exclusive territories to make quotations on its machines.

The sales manager proposed that the company permit any reputable machinery merchant or supply firm to solicit orders for its machines. Under this plan it would be possible for the company, by refusing to quote to another merchant on a particular job, to protect the first merchant who had negotiated for the order, provided he promptly submitted to the company the data concerning the order. Under this plan, moreover, the company would be able to sell directly without paying a commission to any representative.

The Duran Machinery Company did not maintain a crew of salesmen, either to call on distributors or to call on manufacturers. The sales executives, however, sometimes visited manufacturing plants to solicit orders. The company was of the opinion that the expense of direct sale, by means of salesmen, would be disproportionately large. The sales manager proposed in 1927, however, that the company should experiment with employing a few salesmen to visit distributors and to assist them in selling Duran machines.

A further proposal of the sales manager was that the company should increase its trade paper advertising and that in its advertising it should state definite performance facts about its machines.

The company decided to discontinue the exclusive territorial arrangements as proposed, and to make quotations to any reputable machinery merchant or supply firm requesting them. No general announcement of the new policy was to be made to the trade, as the company preferred to put the new plan into effect gradually. The firms which were informed showed interest in the proposition, although most of them asked for exclusive territories.

The company also increased the size and frequency of its advertisements in trade papers and changed the tone of its statements, concentrating on performance facts. The chief object of the advertising was to elicit inquiries. During the first few months of 1928 about half the inquiries received were from manufacturers and about half from distributors. The company also



placed one of its own salesmen in a middle western territory to assist its representatives there.

By April, 1928, the new plan had not been in effect long enough to enable the company to judge its success.

COMMENTARY: The chief reason stated for the decision of the Duran Machinery Company to discontinue the exclusive agency franchises of machinery distributors was that sales were being lost in consequence of inadequate coverage of the potential market by the holders of its franchises. Under the new plan, however, by permitting numerous firms to sell its machinery competitively, it was likely to encounter friction and to experience increasing indifference toward its machines on the part of merchants. The sale of such machinery usually is achieved only by careful negotiation, and if the salesmen of two or more distributors found that they were competing for an order on the same make of machine from a particular customer, friction and waning interest would be almost certain to result. Those distributors who held exclusive franchises for machines designed to serve the same purposes as Duran machines, furthermore, were likely to exert preferential efforts for the sale of the competing machines as against Duran machines. It seems improbable that sustained interest in the sale of Duran machines would be manifested by an appreciable number of merchants after the exclusive franchises were withdrawn. The decision, therefore, called for a careful weighing of the lack of special interest under the one plan against the disadvantages of inadequate coverage of the market under the other plan.

It is not clear as to how inadequate the coverage of the market by the agents was. Some instances of that sort were inevitable, but if they were relatively uncommon they did not constitute sufficient reason for a change in policy. It also would have been significant to know how far these conditions were characteristic of a few territories and how far they were typical of all territories. If the plan of employing agents could have been demonstrated to be thoroughly unsatisfactory, then an immediate change to direct sale as an alternative to permitting distributors generally to solicit orders for Duran machines deserved more careful consideration than was given it. For decision on that question, however, a careful analysis of the market also was needed.

April, 1928

M. T. C.

## BRIGHTING PAINT COMPANY<sup>1</sup>

### MANUFACTURER—PAINT AND VARNISHES

MARKET COVERAGE—*Intensification of Sales Coverage to Meet Hand-to-mouth Buying Practices.* A company manufacturing paint and allied products had segregated its salesforce between two types of markets, industrial plants and distributors. An analysis of the Southern Ohio territory, where one salesman sold to the industrial market, convinced the company that it was not obtaining sufficient coverage of that market. Since customers had adopted hand-to-mouth buying policies, one salesman could no longer cover a large territory. The company decided to divide the territory and to add another salesman. The result of this action was a satisfactory increase in sales volume in the Ohio district.

(1924)

The Brighting Paint Company manufactured paint and allied products, such as varnishes, enamels, and lacquers. Slightly more than half its sales were made directly to industrial users; the remainder were made to distributors reaching for the most part the artisan and consumer market. In general different Brighting salesmen sold to these two types of markets. In 1924 one salesman was covering the industrial market in the southern Ohio territory in which the company a few years previously had acquired a plant. At that time the company was contemplating placing an additional salesman in the territory for the industrial market.

The Brighting Paint Company operated 16 factories in various sections of the United States. In addition, it owned several mines and plants for the production of raw materials for paints, such as zinc, lead, and oils; these mines and plants had been purchased to insure uniform materials in adequate quantities and at the lowest possible prices. A wide geographical distribution of factories for paint and allied products improved the company's competitive position. Nearness to a market not only facilitated delivery but also decreased the delivered price of paint by decreasing freight charges. The acquisition of a new

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<sup>1</sup> Fictitious name.

plant was followed by a more intensive coverage of the territory surrounding it. The southern Ohio plant was one of several purchased by the company a few years after the World War. The fact that, since 1921, customers had been buying more frequently and in smaller quantities was a factor leading the company to consider dividing the Ohio territory.

The company had approximately 10,000 industrial customers. Many of them bought paint for maintenance purposes only. More than half the company's total sales to industrial users, however, were made to companies that applied the paint to their products. The two most important industries in this class were manufacturers of automobiles and of furniture; other industries using large quantities of paint as a production material were manufacturers of toys, radio cabinets, and electrical equipment. The company set no minimum to the size of orders it would accept; generally the orders received exceeded \$5 and were less than \$1,000. Typical orders for paint to be used for maintenance purposes ranged between \$20 and \$100; while the average for paint to be used on products was somewhat higher.

There were 100 salesmen in the company's industrial division. The salesmen ordinarily had to conduct initial negotiations with the purchasing agents in prospective customers' organizations; in 90% to 95% of the cases, however, the purchasing agents merely made out the orders, and were not responsible for placing them. The salesmen had to find out for themselves and obtain interviews with the men who actually determined the purchases. Purchases were determined by men all the way from foremen to general managers. Only about 25% of the orders received by the Brighting Paint Company were taken by the salesmen while at the customers' plants; the rest were received by mail.

The company made about 10% of its sales on contracts, which were placed by the customers about once every four months. A contract stated the minimum and maximum requirements which the customer expected to order. Contracts were not rigidly adhered to, however; it was customary to consider them more in the nature of estimates.

The salesmen traveled out of the branch sales offices located at each of the various factories. Each branch office was managed by a regional director, who was responsible for the sales in his territory. The regional directors also managed the salesforce for



the merchant trade, but the two salesforces were distinct except in rare instances when the sales volume in a territory did not warrant both a salesman for the industrial market and a salesman for the market among distributors.

A few of the company's industrial salesmen spent a large proportion of their time specializing in work with several industries to which the sales volume was large. Such was the case with manufacturers of automobiles, furniture, pianos, and musical instruments, and with producers and distributors of oil. Bakeries and ice cream manufacturers also were reached by a special salesman, who had been assigned this task because he had shown particular ability in selling to these industries. But in no case did one man specialize on one industry to the exclusion of all others.

Each Brighting factory had its own chemical and service staffs. Technical service was particularly important to those companies having special problems in the finishing of their products and to those companies which operated under conditions involving special problems in plant maintenance. The technical problems in the finish of automobiles, airplanes, and pianos, for instance, were distinct enough and important enough to warrant service men specializing in each of those industries. There were also service men especially for oil refiners and distributors, who required special paint to resist the action of oil. The multiplicity of conditions for which its products were used necessitated the company's manufacturing over 1,000 different kinds of paints and allied products.

The salesmen's travelling expenses were paid by the company and the salesmen received a uniform rate of commission on sales of practically all items. However, if a salesman made a sale at a price reduction that resulted in lowering the company's net profit on the transaction below the usual figure, the salesman's commission was reduced sufficiently to absorb half the loss. Price reductions had become more frequent since 1921, as competition had increased. The salesmen also were assessed 5% of the salaries of the service men, because technical service aided them in securing and holding customers. The salesmen, themselves, had no technical training.

The company did practically no advertising to the industrial market. The sales manager believed that the reputation of the Brighting Paint Company was of sufficient advertising value.

When a new product of general interest was introduced, however, it was advertised. Such was the case with lacquer, for instance, which was hardly known as an industrial product prior to 1924. Its introduction had caused drastic changes in the painting of automobiles as well as in the manufacturing processes of paint producers.

The Brighting Paint Company, shortly after the World War, purchased an Ohio paint company, Marshall and White, and continued the use of the latter's name, brands, and labels. The identity of the new company was maintained in accordance with the Brighting Paint Company's general policy of taking advantage of the goodwill of the companies which it purchased. In only one of the nine cases in which it bought existing plants, did the Brighting Paint Company substitute its own name and brands, and in this instance the company purchased was in a decadent stage. This policy of the company sometimes resulted in having salesmen from three or four of its factories selling the same types of items in the same city; once a prospective customer was obtained as a regular customer by one branch, however, salesmen of other branches were prohibited from calling upon him.

The Brighting Paint Company purchased factories so located as to be able to deliver paint to any place in the United States at a fairly low freight charge. When freight exceeded six to eight cents a gallon it was difficult to compete on price with manufacturers whose facilities enabled them to deliver below these freight rates. The geographical distribution of its plants, however, eliminated the freight problem for the Brighting Paint Company. Prices were quoted as customary in the trade; that is, f.o.b. factory with full freight allowed in a majority of cases.

An analysis of the Southern Ohio territory in 1924 convinced the company that it was not obtaining sufficient coverage there. During the preceding year Mr. Warren, salesman for this territory, sold \$200,000 worth of paint to 80 accounts. There were 250 to 300 potential customers in this district whose combined purchases of paint were estimated to be from \$300,000 to \$500,000 annually.

The records for Mr. Warren showed that it was impossible for him to give adequate attention to many more customers than he was already visiting. Prior to 1921, only two or three calls a year upon the average customer had been necessary; manufacturers then ordinarily placed their orders four or five times a year.

But more frequent and smaller orders became noticeable after 1920, when customers began ordering every two or three weeks, especially those using paint on their products. Rapidly fluctuating prices also had encouraged smaller purchases. The public, moreover, was beginning to shift its preferences for color and styles of finish frequently, and this in turn caused the manufacturers to buy in smaller quantities. These factors, combined with growing competition, necessitated more frequent calls and quicker delivery on the part of the Brighting Paint Company; at least five or six calls a year upon most manufacturing users became necessary. The larger accounts required even more frequent visitation.

To meet these changing conditions, the Brighting Paint Company developed the policy of establishing more complete and more frequent coverage of its prospective and actual trade by reducing the size of territories and by adding new salesmen as rapidly as was economically feasible.

The sales manager of the Brighting Paint Company deemed an expected sales volume of \$45,000 sufficient in most instances to warrant the addition of a salesman in a territory covered by one salesman. He believed that the southern Ohio territory would yield this amount after an initial period of development. This territory, in 1924, was divided, therefore, and a junior salesman on a salary basis was added. As was the company's usual practice, the junior salesman was not given any of the company's accounts, but was given the names of prospective customers.

In 1927 the industrial sales volume in the Southern Ohio area was \$375,000, an increase of \$175,000 over the volume in 1924. The new salesman was responsible for \$100,000 worth of the additional business, and Mr. Warren increased his business in spite of the cutting down of his territory.

The sales manager in 1928 was contemplating making a still further division of the Southern Ohio territories. He estimated that consumption of paint had so increased that there was still \$500,000 worth of potential business in that district.

**COMMENTARY:** This case presents a variety of issues of major importance in marketing, but unfortunately the evidence furnished is inadequate for a real evaluation of the company's practices.

In segregating its sales organization between its two types of markets the company was in accord with the sound practice of numerous



companies in other fields.<sup>2</sup> The practice of the Brighting Paint Company in having its salesmen, in certain instances, specialize by industries clearly had strong arguments in its favor. It is not clear, however, how that practice was reconciled with the practice of intensifying the coverage of particular territories, for a specialization by industries tends to cut across geographical boundaries and thus runs counter to an intensification of geographical coverage. Apparently the company was deciding each situation on its merits without establishing definite policies.

The company's practice of continuing to use the names and brands of the companies whose businesses it purchased, rather than to unify the products and sales promotion methods, suggests a question on which it would be especially enlightening to have a full statement of the facts. Not only did this practice result in having salesmen from three or four factories owned by the company visit the same town, but general advertising by the company for the industrial market obviously was impractical while a heterogeneous brand policy was adhered to. Although the subject of industrial advertising was dismissed lightly in the case, the reasons stated therefor were not convincing.

It is stated that an analysis of the Southern Ohio territory in 1924 showed that the company did not have adequate coverage there. The test which was applied to determine the adequacy of coverage is not explained; no indication is given regarding the class of competitors from whom patronage was to be diverted to the Brighting Paint Company; and no explanation is furnished with respect to the basis on which sales were to be made, the prices to be offered, the service to be rendered, or the qualities of the products to be stressed in order to secure a larger share of the industrial paint business in Southern Ohio. Without such information as that the merits of the policy of intensifying the coverage cannot be evaluated.

March, 1928

M. T. C.

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<sup>2</sup> See National Rock Drill Company (A), 6 H.B.R. 113; Raeburn Electric Company, 6 H.B.R. 173; Nobel Chain Company, 6 H.B.R. 179; Queensbury Pump Company (B), 6 H.B.R. 122.

## KENT COMPANY<sup>1</sup>

### MANUFACTURER—SMALL TOOLS

**MARKET COVERAGE**—*Reapportionment of Sales Efforts Based on Market Analysis.* A company manufacturing small tools and distributing through wholesalers and supply firms undertook an analysis of the geographical distribution of sales and the adequacy of coverage of its various territories. On the basis of this study, the company decided to readjust salesmen's territories with the result that a more efficient control of the salesmen and a substantial increase in sales volume were obtained.

**MARKET ANALYSIS**—*Data Secured to Show Geographical Distribution of Sales and Adequacy of Market Coverage.* A company manufacturing small tools, which it distributed through wholesalers and supply firms, in undertaking an analysis of the geographical distribution of sales and the adequacy of coverage of its various territories, limited the survey to the 18 states in which the company made the greater portion of its domestic sales. For this analysis the company obtained data to show: the relative importance of each state with respect to its capacity for buying small tools for use in productive processes; the relative importance of each state as a market for maintenance and repair tools; the total consumptive capacity of each state as a ratio of the total capacity; distribution facilities; number of calls made by salesmen; and number of calls necessary for complete coverage.

The Kent Company, a manufacturer of small tools, instructed its sales promotion manager to study the geographical distribution of its sales and the adequacy of coverage of the various territories. The analysis was used as a basis for redistricting the salesforce and for gaining greater control over the activities of the salesmen.

Some of the tools were used entirely in machine production work, some exclusively in repair work, and some in both. For example, Kent screw plates, or thread-cutting tools, were bought almost entirely for maintenance and repair purposes. Kent gauges, on the other hand, were sold altogether for use in connection with production processes; they were used for gauging pipes or rods and the threads in or on them in order to insure standardization

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<sup>1</sup> Fictitious name.

and interchangeability. Other Kent small tools were used both in production and in maintenance.

The prices of the tools ranged from less than 10 cents each to over \$100. No quantity discounts were granted but freight was allowed on shipments of 100 pounds or more.

Mill supply firms constituted the main channel of distribution for Kent tools, but hardware wholesalers and automobile accessory wholesalers were also important outlets. The salesforce in 1923 was composed of 15 men. Much of their time was spent in missionary work with distributors' customers who used the tools for production purposes. The better mill supply firms carrying full lines of Kent small tools usually had an annual sales volume of Kent tools of from \$10,000 to \$50,000, with an average inventory ranging between \$2,000 and \$5,000. The company in many instances shipped tools directly to distributors' customers located relatively near the Kent plants; but in more distant territories, such as the Far West, less than 5% of sales were shipped directly to the ultimate users. Nearly 80% of the total sales of screw plates in the United States were made by the Kent Company. Screw plates, being of use in almost every plant and garage, were carried by a great majority of mill supply firms, automobile accessory wholesalers, and hardware wholesalers.

Although it estimated that about 20% of the total number of potential users of small tools in the United States accounted for about three-fourths of its domestic sales, the company did not consider it wise to sell directly to users. The company had satisfactory relationships with distributors; it had always favored the distributors on the occasions when large users sought to place their orders direct. The sales promotion manager estimated that 85% of the better distributors and about 50% of the others carried at least one line of Kent tools. Distribution through wholesalers and supply firms was necessary, the sales promotion manager believed, especially for the lines of tools that were sold to the thousands of customers who desired quick delivery for repair work. The purchases of distributors, moreover, showed less fluctuation with general business conditions than the purchases of the ultimate users.

The market analysis undertaken by Mr. White, the sales promotion manager of the Kent Company, had to be made chiefly with data readily available; no special appropriation was made for



intensive research. Mr. White was faced with a number of obstacles which made it difficult to complete an accurate survey. First, there was a dearth of information regarding the total volume of small tool business. The available information, moreover, was not of great aid because of the elastic interpretation of small tools as a category of products. Although there was a certain amount of cooperation in exchanging market data among the few leading manufacturers of some items of small tools, there was little information obtainable from the numerous small manufacturers, who produced a large proportion of the total volume of small tools, but who generally served local markets or specialized on single types of tools.

In the second place, it was almost impossible to determine with any degree of accuracy the proportion of small tools used for production purposes and for maintenance and repair purposes. The same consumer frequently bought tools for both uses, and he might buy them all from manufacturers, from distributors, or from both.

In the third place, the problem was further complicated by the fact that there was a great variation in the practice of manufacturers as to the proportion of tools which they sold direct and which they sold through distributors, such as hardware wholesalers and retailers; supply houses furnishing mills, railroads, and mines; and supply houses for electrical equipment and for automobile accessories and repair parts.

Finally, determination of the consumption of small tools by states or territories was complicated by the fact that a particular distributor might cover only a small area or might cover several states. The prestige of distributors, furthermore, varied; in some states it was estimated that 95% of the small tool business was handled by distributors, and in other states not over 25% or 30%.

In Exhibits 1, 2, 3, and 4 are given samples of the analysis made of the market and of the distributors. The state was selected as the territorial unit because sales figures of Kent products over a period of years were available only by states or groups of states. The analysis by states was fairly satisfactory, however, because most of the territories of the salesmen coincided for practical purposes with state lines; in the other cases where territories contained parts of states, division of data was not so

difficult as to destroy the value of the analysis. The survey was limited to the 18 states in the eastern and middlewestern parts of the United States where the company made the greater portion of its domestic sales.

The data in Exhibit 1 were secured for the purpose of showing the relative importance of each state with respect to its capacity for buying small tools for use in production processes. In column 1 is presented the number of metal consuming or metal working plants, which were the principal users of Kent tools for production purposes. The following industries were selected: manufacturers of agricultural machinery; manufacturers of stoves and furnaces; manufacturers of automobiles and automobile parts; electrical appliances manufacturers; foundries; machine shops; brass, bronze, and copper working plants; railroad repair shops; and miscellaneous metal working plants. The combined value of the output of the total number of such plants in the 18 states included in the survey was divided by the number of plants to give the average output per plant. That average then was used in figuring the number of "average" plants in each of the 18 states, as shown in column 3 of Exhibit 1. In column 4 the figures in column 3 are reduced to percentages, with the total number of average plants in the 18 states representing 100%.

EXHIBIT 1  
RELATIVE VALUE OF SPECIFIED STATES AS POTENTIAL MARKET FOR  
SMALL TOOLS FOR USE IN PRODUCTION

	1. Number of Plants	2. Value of Output (Million \$)	3. Number of Average Plants	4. Percentage of Average Plants
Connecticut.....	751	459	978	4.9
Pennsylvania.....	2,764	1,184	2,540	12.8
Etc.				

The figures in Exhibit 2 were secured to show the relative importance of the states as markets for maintenance and repair tools. Many small tools were used in garages and quantities were bought by individuals for home use particularly on the farm; the major part of the maintenance sales, however, were for work in the non-metal manufacturing field, as in quarries, textile plants, sugar refineries, mines, and the like. The number of garages, the

automobile registration, the population, and the number of average non-metal consuming plants were selected to show the relative importance of the states as markets for tools for repair purposes. The percentages of each of these factors were combined on an equal basis to give the composite percentage as shown in column 5.

## EXHIBIT 2

## REPAIR AND MAINTENANCE TOOL MARKET IN EACH STATE EXPRESSED AS PERCENTAGE OF MARKET IN ALL STATES

	1. Number of Garages	2. Population (Millions)	3. Auto Regis- tration	4. Number of Average Non-metal Plants	5. Composite Percentage
Connecticut.....	1,824	1.4	178,000	1,652	2.3
Pennsylvania.....	7,899	8.7	1,065,000	17,120	15.2
Etc.					

Note: The percentages for the items in the first four columns, from which the composite percentages are figured, are omitted for the sake of brevity.

Since both production and maintenance tools were often sold to the same distributors and by them to the same consumers, the results in Exhibits 1 and 2 were combined in Exhibit 3 to show the total consumption capacity of each state as a ratio of the total capacity of the 18 states. But the two factors had to be weighted because states varied greatly in the proportion of the tools used for the two purposes. It was necessary, therefore, to have a different basis of combination for each state. During the previous year the company had completed an analysis of the sales of over 4,000 distributors of small tools of all classes. Among other things the reports showed that over 80% of the volume of screw plates stocked by these 4,000 distributors were manufactured by the Kent Company. It was further revealed that the distribution of Kent screw plates was not spotty but was regular and that approximately the 80% figure held in every state.

A subsequent survey of six representative Kent distributors who were located in sections of the country where their sales were almost entirely for maintenance purposes, revealed the fact that approximately 40% of their business in Kent tools was composed of screw plates. Since this proportion was considered to be typical, it could be used as an index; given the quantity of screw plates



sold in any state, the approximate volume of maintenance business could be determined by multiplying the screw plate volume by  $2\frac{1}{2}$ . The Kent Company knew the sales volume of its screw plates in each state and, consequently, could figure approximately its maintenance tool business. The quantity of tools sold for production purposes then could be determined by subtracting the maintenance sales from the total sales. The proportions of these two classes of sales are shown in column 3 of Exhibit 3. These proportions were used as a basis of weighting the percentages, as shown in Exhibits 1 and 2, in figuring the combined consumption capacity shown in column 4 of Exhibit 3.

## EXHIBIT 3

COMBINED PRODUCTION & MAINTENANCE TOOL MARKET IN EACH STATE EXPRESSED AS PERCENTAGE OF COMBINED MARKET IN ALL STATES

	1. Production Tool Market	2. Repair Tool Market	3. Ratio of Markets		4. Combined Market
			Production	Repair	
Connecticut.....	4.9%	2.3%	85	15	4.3%
Pennsylvania.....	12.8	15.7	40	60	13.8
Etc.					

It was realized that this method of combination was somewhat arbitrary, but in no instance were the figures over 10% different from careful estimates made by experienced executives of the Kent Company from their knowledge of actual conditions.

The next step was to determine the distribution facilities in each state. Data on this point are given in Exhibit 4. Mill, railroad, and mine supply firms constituted the most important channels of distribution both individually and considered as a whole. The only other important distributors were hardware wholesalers and automobile accessory and replacement parts wholesalers. The numbers of each of these classes were readily available. They were reduced to the number of "average" distributors on the basis of the number of salesmen. There were, for instance, in the 18 states considered, 401 whole-sale hardware companies with a total of 3,524 salesmen, or an average salesforce of  $8\frac{3}{4}$  men for each company; the number of average

wholesale hardware distributors in any one state, therefore, was figured by dividing the combined number of salesmen of such distributors in that state by  $8\frac{3}{4}$ . The number of average distributors, as determined in this manner, in each of the three classes that constituted the company's chief distribution channels were added, but with the elimination of duplications. That is, in the totals shown in column 4 of Exhibit 4 a distributor selling both hardware and automobile accessories, for example, was counted as one firm and not as two, although such a distributor would be listed both in column 1 and column 2 of that Exhibit. From the totals in column 4 were figured the percentage of average distributors in each state, with results as shown in column 5 of Exhibit 4. The ranking of states by this method was not altogether satisfactory, however, because many distributors located in one state sold in other states as well.

## EXHIBIT 4

DISTRIBUTION OF SELECTED TYPES OF DISTRIBUTORS BY STATES, IN NUMBER AND IN PERCENTAGE OF TOTAL

	1. Number of Average Wholesale Hardware	2. Number of Average Wholesale Automobile Accessory	3. Number of Average Supply Firms*	4. Total Average Mill Distri- butors Less Duplications	5. Percentage Distribu- tion of Column 4
Connecticut.....	7	14	61	38	2.7
Pennsylvania.....	62.2	92	201	212.2	15.0
Etc.					

\* Includes retail hardware stores handling mill supplies. Source—*Hardware Age*, 1924.

Next, the sales promotion manager tabulated data from salesmen's call reports which the salesmen had been sending in to the home office during most of the preceding year. The results are given in Exhibit 5. The territories of salesmen A, C, E, I, and J coincided with state lines; the territories of B and D involved relatively simple division of states. Salesmen F, G, and H, and K, L, and M worked out of branch offices in several states; G and K were division managers and consequently were not expected to make as many calls as the other salesmen.

The figures in Exhibit 5 revealed the proportion of time spent in calling on users and distributors, a condition to which the company previously had paid no particular attention. About 55% of the calls were made on distributors and 45% on users, whereas

## EXHIBIT 5

## AVERAGE NUMBER OF CALLS OF EACH SALESMAN AND NUMBER EACH SHOULD MAKE

Salesman	Average Number of Calls Per Week on Distributors	Average Number of Calls Per Week on Users	Average Total Number of Calls Per Week	Total Number of Calls Per 50 Week Year	Total Number of Calls Salesmen Should Make
A	7.2	12.4	19.6	980	1,585
B	23.1	8.5	31.6	1,580	1,580
C	14.2	13.1	27.4	1,370	1,450
D	11.2	7.3	18.5	925	1,400
E	17.0	14.7	31.7	1,585	1,585
F	9.3	19.7	29.0	1,450	1,450
G	12.7	1.6	14.3	715	1,015
H	32.3	1.0	33.3	1,660	1,660
I	7.4	16.7	24.1	1,205	1,580
J	5.7	13.4	19.1	955	1,450
K	19.8	.5	20.3	1,015	1,015
L	31.7	.5	32.2	1,610	1,610
M	17.5	5.5	23.0	1,150	1,585

a survey made by the company indicated that a more effective division of time would be 20% of calls on distributors and 80% on users.

The proportion of calls on users was increased primarily by stimulating the salesmen to make more calls each week rather than by decreasing calls on distributors. Comparison of figures in column 4 and column 5 shows the performance of the salesmen. The average salesmen, not including division managers, made slightly over 1,300 calls a year. Four of them made between 1,500 and 1,600, and two of them more than 1,600. About 1,450 calls, therefore, were considered to be a normal standard upon which to make adjustments for particular territories.

The figures in Exhibit 6 were compiled with the view of showing the number of calls necessary for what the company considered complete coverage of each territory. The territories are identified with the letters given to the salesmen selling in them.

From an independent survey it was found that in any territory the most active coverage of wholesalers and supply firms by the salesmen of small tool manufacturers was an average of 10 calls a year on each distributor. This average, therefore, was used in the determination of the number of calls necessary for complete



## EXHIBIT 6

## NUMBER OF CALLS NECESSARY FOR COMPLETE COVERAGE OF SALES TERRITORIES

(Number of Average Plants Estimated for the Three Territories Not Coinciding with State Lines)

Territory	1. Number of Distributors (Exhibit 4)	2. Number of Calls at 10 Calls a Year	3. Number of Average Plants (Exhibit 1)	4. Number of Calls on 53% of Plants at 5.7 Calls a Year	5. Total Num- ber of Calls for Complete Coverage	6. Percentage Distribution of Calls for Complete Coverage
A	65	650	1,074	3,245	3,895	5.2
B	122	1,220	1,082	3,269	4,489	6.0
C	90	900	1,175	3,550	4,450	6.0
D	137	1,370	1,119	3,381	4,751	6.4
E	203	2,030	1,230	3,715	5,745	7.7
F, G, H	176	1,760	3,160	9,546	11,306	15.2
I	160	1,600	2,800	8,459	10,059	13.7
J	89	890	4,430	13,383	14,273	19.4
K, L, M	360	3,600	3,774	11,401	15,001	20.4
Total	1,402	14,020	19,884	59,949	73,969	100.0

coverage of distributors, as shown in columns 1 and 2. Column 3 shows the number of average metal working or consuming plants; non-metal working plants because of their small requirements were reached through distributors and were not here considered. The independent survey, referred to above, also showed that only 53% of metal working plants were called on at all by any salesmen of small tool manufacturers, and that an average of 5.7 calls annually on each of these 53% was the most complete coverage of any territory by any small tool manufacturer. These figures were used in determining the requirements for complete coverage of those users whose purchases justified direct call.

The number of calls required for complete coverage of both distributors and users is shown in column 5 of Exhibit 6 and the percentage distribution of number of calls by territories is shown in column 6.

The essential data obtainable from a market analysis for judging the adequacy of coverage of the territories are recapitulated in Exhibits 7 and 8. The figures which were the primary basis of appraising the territories are given in Exhibit 7; Exhibit 8 is auxiliary. It was figured by the officers of the Kent Company that coverage was adequate in territories A, B, C, and D. Each of these territories required approximately 6% of the total number of calls figured as necessary for complete coverage in the combined territories represented by the 18 states included in the survey. In

## HARVARD BUSINESS REPORTS

## EXHIBIT 7

## TERRITORIAL ANALYSIS

Ratio of Salesmen's Calls to Number of Calls Necessary for Complete Coverage

Territory	Number of Calls With Efficient Coverage under Existing Division (Exhibit 5)	Number of Calls Necessary for Complete Coverage (Exhibit 6)	Ratio of Present Coverage to Com- plete Coverage
A	1,585	3,872	41
B	1,580	4,317	37
C	1,450	4,425	33
D	1,400	4,595	31
E	1,585	5,720	28
FGH	4,125	11,240	37
I	1,580	10,000	16
J	1,450	14,180	10
KLM	4,210	15,125	28
Total	18,965	73,969	26

## EXHIBIT 8

## TERRITORIAL ANALYSIS

Ratio of Kent Distributors to Total Distributors

Territory	Total Num- ber of Dis- tributors (Exhibit 4)	Number of Kent Dis- tributors	Percentage of Kent Distribu- tors	Percentage Consumption Capacity (Exhibit 3)	Percentage Distribu- tion of Kent Sales	+ —
A	65	35	54	5.1	6.3	+1.2
B*						
C	90	65	72	5.4	5.3	— .1
D*						
E	203	71	35	8.0	8.4	+ .4
FGH	176	135	77	15.2	14.9	— .3
I	160	95	59	11.6	9.1	—2.5
J	89	50	56	18.0	10.2	—8.4
KLM*						
Total	1,402	910	65	100.00	100.00	

\* For Territories B, D and KLM certain figures are omitted because there was no satisfactory basis for dividing them.

other words, the officers of the Kent Company figured that the proper ratio was one salesman to about 6% of the sales opportunities and requirements as represented by the number of calls. The same relationship can be expressed as shown in column 3

of Exhibit 7; when a salesman working efficiently could cover at least 31% of the requirements for complete coverage in his own territory, the officers of the Kent Company were satisfied that the company did not need additional representation in the territory at that time; substantially greater coverage could be obtained only at an excessive sales expense.

Territory F, G, H, was covered by two salesmen and a division manager, who were adequate to the needs according to the preceding criteria.

Territory E containing 7.7% of the required calls was considered somewhat too large for a one-man territory, but its relation to routes of other salesmen was such that a change was not considered feasible at the time.

The inadequacy of coverage of territories I and J and the opportunity for larger sales there, as revealed by the survey, came as a great surprise to the executives of the company. To each of these territories was assigned a new salesman; and in territory J it was planned to open a branch office with stock.

Another salesman was also added to territory K, L, M where the percentage of total calls was 20.4. Since one of the men in the territory was manager, he could not cover 6% of the calls.

The sales promotion manager believed that his market analysis was simple and relatively inexpensive compared to its value in giving a basis for readjusting the number of salesmen to the various territories and for directing with more care the salesmen's activities. Within two years the company experienced a 10% increase in its sales, which was considered a good performance; although there were several other factors which might have been responsible for a considerable amount of this increase, the sales promotion manager felt certain that much of it was due to the analysis and its application. The market study also gave actual data for demonstrating to the salesmen deficiencies in their coverage; and cooperation was received from them which could not have been secured without specific information as to their performance and their opportunities. The increased missionary work with users, furthermore, strengthened the goodwill of the Kent Company with its distributors. Finally, the concrete estimation of the market and of the coverage hastened action on the part of the executives, who might have delayed action on recommendations based on opinions only.



COMMENTARY: This case presents the results of a pioneer effort at determining analytically the adequacy of the coverage of sales territories. In judging the case it must be borne in mind that it was a pioneering effort, for which almost no guidance existed. There also was a serious dearth of significant data available, and only a short time was allowed for the analysis with no substantial funds for research.

The first step, in the analysis which was made by the Kent Company, was to ascertain the number of plants using small tools for production purposes and then to weight the number in each state to compensate for variations in size. At this point one of the basic premises of the method used comes into question. The potential volume of purchases and hence the potential market obviously could be assumed to vary with the size of plant. It does not follow by any means, however, that the time required for a salesman's call could be expected to vary directly between plants in proportion to the differences in their size. The time spent by a salesman in travelling and the time spent in waiting for an entrée for a sales interview were likely to be as great for a small plant as for a large plant, and travelling and waiting usually account for a substantial percentage of a salesman's working time. Perhaps, in this instance, the assumption of the above premise, that a direct relation exists between the time required for a salesman's call and the size of the plant visited, was necessary because of limitations which have been stated. The premise, nevertheless, is open to question.

Another, incidental, detail of this first step was the use of value of product as an index to size. A plant working on brass or copper had a greater value of product than a similar plant working on steel, for example, but it was not necessarily a larger potential purchaser of small tools merely because its raw material was more costly. Number of employees, it seems, would have provided a better index to size of plants for the purposes of this analysis.

The second step in the study was to obtain an index to the market for tools sold for repair and maintenance purposes. The method used, which is explained in the text of the case, gave only a rough approximation to the facts but it probably was about as close a guide as could have been obtained under the circumstances. Questions might be raised regarding some of the details of the method employed, but they would not lead to any appreciable alteration of the results. The utilization of the company's figures for screw plate sales is to be noted as an ingenious scheme for obtaining a coefficient for figuring the volume of maintenance business, which could be subtracted from the total sales in a particular territory to give the figure for sales of tools for production purposes.

The indices obtained by the analysis up to this point furnished a guide to the relative potential market in each state, as a percentage of the total market in all states under consideration. Little use seems to have been made of these ratings or of any of the data on the maintenance market when the company came later to consider the work of the salesmen.

In obtaining an index to the relative number of distributors in each state, the actual number was weighted to allow for differences in sizes of business, the weighting being in proportion to number of salesmen employed by the distributors. The propriety of weighting the number of distributors according to size is open to question for the reasons stated in discussing the plant indices, at least if the figures were to be used for an analysis of the coverage of sales territories by the Kent Company.

The data from the preceding computations which were used for testing the adequacy of the coverage of sales territories were those for the number of average plants and number of average distributors. If the validity of the scheme of weighting used is accepted as dependable, then those figures furnished a guide to the number of distributors and the number of users on whom calls were to be made in each state. The determination of those figures, however, was by far the simplest part of the problem of judging the adequacy of the coverage of the sales territories. The most vital questions and the ones most difficult to answer pertained to the necessary frequency of calls on distributors and the justifiable frequency of missionary calls on users.

It is stated in the case that another survey made by the company had established the fact that the most effective procedure was to have 20% of the salesmen's calls made on distributors and 80% on users for missionary purposes. The methods by which that fact was established would be interesting and highly instructive, for there are no published data to support such a conclusion and from personal acquaintance with numerous manufacturing companies I have found none that had definite proof as to the amount of missionary sales work that is justified under such conditions.

In order to determine the number of calls to be made on each distributor and on each user, the most active coverage by competitors was taken as a guide. That procedure begged a vital question. The company had no proof that it was necessary for its salesmen to call as frequently, less frequently, or more frequently than competitors' salesmen. Nor did it have any reason for assuming that any competitors had determined accurately the frequency of call needed. So far as I am aware no fully scientific study of that problem has been made, and this case did not make any contribution thereto.

The analysis which the Kent Company made was worth while for showing the relative potential importance of the various segments of its market and for revealing weakness in the operations of particular salesmen. It did not settle the basic questions, however, as to the amount of missionary work needed and as to the proper frequency of call.

November, 1928

M. T. C.



## SANDUSKY FIRE EQUIPMENT COMPANY<sup>1</sup>

MANUFACTURER—FIRE PROTECTION EQUIPMENT AND TIRE CHAINS

SALES PLANNING—*Method for Allocating Sales Quotas to Territories.* A company manufacturing fire protection equipment and automobile tire chains adopted a method for breaking down, on a territorial basis, its total annual sales quota. The method selected called for a division of the sales quota on the basis of weighted figures for white population; passenger car and truck registrations; wealth; value of manufactured products; value of oil produced; and kilowatt hours of electricity generated.

DISTRIBUTION CHANNELS—*Distributors Used in Preference to Direct Sale through Sales Branches.* A company manufacturing fire protection equipment had sold its products directly to users through its own sales branches. In order to reduce sales expense and to obtain more adequate market coverage, however, the company decided to discontinue most of its branches and to sell through selected distributors.

(1928)

The Sandusky Fire Equipment Company wished to develop a satisfactory method for distributing to its various sales territories equitable portions of the total annual sales quota established at the beginning of a year. In 1928 the company decided upon a method of distribution which it deemed satisfactory.

The Sandusky Fire Equipment Company manufactured a variety of fire extinguishing equipment. Its fire extinguishers were of various types, to meet different kinds of fire hazards, and were made in hand sizes and also in large sizes mounted on wheels. Prices ranged from a few dollars each, for hand extinguishers, to two or three hundred dollars each for wheeled extinguishers.

Among the largest users of Sandusky fire equipment were railroads, public utilities, oil refiners and distributors, departments of the United States Government, factories, public buildings, offices, stores, warehouses, garages, and filling stations. The extinguishers also were used in private residences.

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<sup>1</sup> Fictitious name.

In addition to fire protection equipment, the company, in 1926, began to manufacture and market tire chains for automobiles and trucks.

The company also, in 1927, placed on the market a new type of automatic fire protection equipment for use on fixed hazards. An installation of this equipment was a complicated technical matter and cost from a few hundred to several thousand dollars.

Sandusky fire protection products were of high grade. They were approved by the Underwriters' Laboratories and also by the Associated Factory Mutual Laboratories. Users of fire protection equipment were interested in having it installed, not only because of the protection it provided, but also because insurance rates were lower on property protected by approved fire equipment.

Prior to 1918 the company had sold its products directly to users almost entirely. It had maintained sales offices with small stocks in 40 cities, as well as 4 large branch offices with complete stocks. Its salesforce had numbered 80 men. Those salesmen had solicited orders directly from users. The company had offered discounts to wholesalers and retailers, but the discounts had not been large enough to induce distributors to stock much of the company's goods. The size of orders received had varied widely. In some instances users bought in large quantities and in other instances they required only one or two or three extinguishers, for replacements, perhaps.

It had been proposed in 1918 that the company should discontinue its plan of direct sale and instead sell through suitable wholesale distributors. The principal argument advanced against this plan was that it would involve, to a large extent, the loss of the company's personal contacts with users of its merchandise. On the other hand, there were the possibilities of reduced sales and inventory expenses and of more complete coverage of the market.

The company decided to make use of distributors. It was helped in its efforts to obtain satisfactory wholesale representatives by the fact that it recently had begun to advertise its products in industrial and general magazines. The company did not give exclusive sales territories to its distributors inasmuch as no one type of wholesale outlet could provide complete coverage in any territory. Among the company's distributors were hardware wholesalers, mill supply firms, wholesalers of automotive equip-

ment, marine supply firms, electrical goods wholesalers, and firms specializing in the sale of fire protection equipment. The company required any distributor to whom it sold its equipment to issue a catalog, to maintain a force of traveling salesmen, and to purchase specified minimum quantities of Sandusky equipment. The distributors were not required to carry Sandusky wheeled extinguishers in stock, but they were required to carry stocks of hand extinguishers. Most of the distributors of Sandusky equipment carried no competing lines; some, however, also stocked one or two competing brands.

When it put this plan of distribution into effect, the company discontinued its 40 small sales branches, retaining only the 4 larger branches. It also reduced its salesforce from 80 men to 45 men. After this change the company sold its entire output to distributors with the exception of sales to a few companies buying in very large quantities, that would not ordinarily purchase through distributors.

Inasmuch as no one type of fire extinguisher was suitable for every hazard, it was important that the proper type be sold in every instance. Sandusky salesmen instructed the salesmen of distributors in the application of the various types of equipment and the company also prepared instructive literature for wholesalers and users. The sales manager of the company stated that in the industrial field the type of equipment to be used generally was designated by the classifications and rulings of various insurance rating bureaus.

The company advertised in general magazines and in trade papers reaching selected industries. It also circularized selected groups of users from time to time. For instance, in August it circularized schools and colleges, and, in May, summer hotels.

When the company began to manufacture tire chains, they also were sold to distributors, in many instances the same automobile accessory wholesalers to whom the fire equipment was sold. When the automatic equipment for use on fixed hazards was introduced, however, it appeared to the company to be impracticable to use distributors for that equipment. Each installation of that equipment was a special job, since few fire hazards were exactly the same. The equipment was used for protection against such hazards as were developed by use of oils, varnish, lacquers, enamels, and other inflammable materials. Each installation



needed to be arranged so that adequate protection, with the proper factor of safety, was provided. Technical experts were required to plan and supervise installations. This fact, combined with the further fact that each installation involved a relatively large sum, led the company to decide to sell the automatic equipment directly to users, while continuing to use distributors for the smaller equipment.

In 1928 the company was selling its equipment to approximately 1,600 distributors in the United States. At that time the company had 45 salesmen. Each of these men had a definite sales territory and in that territory sold the full line, including the tire chains and the large automatic installations sold directly to users, as well as the smaller fire equipment sold to distributors. In addition to these salesmen, the company had several technical men who devoted their full time to installations of the automatic equipment. The company's salesmen also did some missionary work for distributors.

The company had found its revised plan of distribution more satisfactory than its previous plan of direct sale to users. Marketing expenses were decreased and more complete market coverage was obtained. Under the revised plan of distribution, some price cutting occurred, however. The sales manager stated, in September, 1928:

Of late years where competition for business has been keen, price cutting among our various distributors has been a factor that we have had to watch very closely. We have tried to sell our distributors on the advantage of maintaining the resale schedule we suggest. A distributor who cuts prices to all concerns, is likely to prove harmful to us, and we have the privilege of discontinuing the sale of our products to him at the jobber's discount, if we so desire.

The salesmen were paid salaries and expenses and also were given commissions on sales made in excess of sales quotas. Each salesman was allowed an expense quota based on the average annual expenses for his territory for the four years just past, revised by the company to allow for changed conditions and special factors. The company had made use of sales quotas for several years, basing the quotas for the various territories on past sales and a general consideration of the distribution of population and

industries. In 1928, however, the company decided that a more systematic method of allocating quotas to territories was needed.

The total 1928 quota decided upon for domestic sales exclusive of sales of the special automatic equipment and of whatever sales might be made by the general office was \$3,000,000. This figure was based on the company's sales experience during the previous five years; on forecasts of probable business conditions during 1928; and on the sales volume needed to enable the company to pay dividends of 8% to 10% after allowing for depreciation on plant and equipment and meeting all other expenses.

In allocating equitable portions of the total quota to the 41 territories into which it had divided the United States for sales purposes, the company decided to make use of the following bases: population exclusive of negro population; passenger car registrations; truck registrations; estimate of wealth; value of manufactured products; value of oil produced; and electric output in kilowatt hours. Figures for these various items, by states, were available in published sources. The company's sales territories did not follow state lines in all instances, but the executives were of the opinion that if a sound quota distribution was made by states, the further distribution to territories could be accomplished easily.

Negro population was excluded because the company's experience showed that negroes purchased very little fire prevention equipment. It was thought that to include them would give the southern states unduly large quotas. Passenger car and truck registrations were, of course, a logical basis for use in allocating sales quotas for tire chains. But they were an equally sound basis, in the company's opinion, for the distribution of quotas for fire extinguishers. The sales manager said in this connection:

Passenger car and truck registrations can safely be taken as a sound basis to use in allocating quotas for fire extinguishers as well as for tire chains. They are indicative of the number of garages and filling stations, and are allied with large users of our fire equipment. The use of highly inflammable materials such as gasoline and oil, and, in fact, the whole development of the internal combustion engine have been factors in the sale of fire extinguishers of our type of manufacture.

For the allocation of its sales quotas, the company decided that value of manufactured products should be given more weight





SANDUSKY FIRE EQUIPMENT COMPANY

9-II	6.30	9.01	8.80	5.76	8.51	17.02	1.36	.68	6.73	7.75	6.66	190,800
31	2.05	9.57	1.03	1.24	8.51	1.28	28.54	14.27	.64	4.28	3.68	110,400
36-39	.77	.09	.09	1.07	.56	1.12	.....	.....	1.15	.72	.62	18,000
6-7-10-12-13	9.13	8.88	9.01	8.90	10.98	21.96	2.37	1.18	10.14	9.89	8.51	255,300
3	.64	.65	.85	.60	.98	1.96	.....	.....	.65	.89	.76	22,800
23	.86	.....	.....	.75	.60	1.20	.....	.....	1.45	.71	.61	18,300
South Carolina	.....	.....	.....	.91	.10	.....	.....	.....	.11	.60	.51	15,300
South Dakota	.60	1.01	.72	1.32	.96	1.92	.....	.....	1.25	1.06	.91	27,300
Tennessee	.91	.59	.37	1.32	.96	3.94	20.39	10.19	2.09	3.79	3.26	97,800
Texas	4.37	1.63	1.31	3.07	1.97	3.94	.....	.....	.47	.33	.28	8,400
Utah	.45	.....	.....	.48	.56	.56	.....	.....	.36	.36	.31	9,300
28-41	.....	.....	.....	.26	.22	.....	.....	.....	1.20	1.77	1.52	45,600
Vermont	.33	.48	.28	.26	.94	1.88	.....	.....	1.53	1.26	1.08	32,400
Virginia	1.84	1.90	2.21	1.52	.92	2.10	.....	.....	1.53	1.34	1.15	34,500
Washington	1.39	.42	.54	1.00	1.05	.....	.....	.....	1.53	1.34	1.15	34,500
West Virginia	1.51	1.43	1.26	1.46	.75	.70	1.41	.....	1.53	1.34	1.15	34,500
Wisconsin	2.74	4.00	3.96	2.45	2.96	5.92	.....	.....	1.53	3.43	2.95	88,500
19-20	.19	.30	.29	.30	.17	.34	3.43	1.71	.03	.45	.38	11,400
Wyoming	.....	.....	.....	.30	.17	.34	3.43	1.71	.03	.45	.38	11,400
District of Columbia	.40	.64	.61	.53	.13	.26	.....	.....	.51	.49	.42	12,600
.....	100.00	109.27	99.78	98.05	98.34	195.68	100.00	49.97	96.96	116.31	100.00	\$3,000,000

than the other items, inasmuch as manufacturing plants and firms in allied industries, such as warehousing and transportation, were very large users of fire protection equipment. Value of oil produced, on the other hand, was given less than normal weight.

The company's method was to figure the percentage distribution by states of the various items it had selected to serve as the basis of its quota distribution, doubling the percentages for value of manufactured products and halving those for value of oil produced, and then taking an arithmetic average of the percentages for each state. The total quota then was distributed among the several states in accordance with the percentages thus obtained. Exhibit 1 shows the quota distribution for 1928.

It was thought that this method of distributing quotas not only would assure a fairer allocation to the various salesmen, but also would serve as a guide to the revision of sales territories. In fact, after the quota for 1928 was distributed, several changes in the boundaries of salesmen's territories were made to provide for a concentration of sales effort in the areas that were potentially the most fruitful.

COMMENTARY: The Sandusky Fire Equipment Company took a sane approach to its quota problem in first determining the approximate volume of sales which it should aim to secure in its entire market. It had no coefficients which permitted it to build up a total from estimates made independently for each district. Its task was to break down a total, arrived at by means of general estimates, into figures for the respective territories. With that starting point it was logical to seek to determine the percentage of the total which should be assigned to each territory.

In working out the details of the plan, some of the methods used were at least open to question. In the first place, it seems that it would have been better to treat the figures for tire chains and the figures for fire extinguishers separately throughout. The two markets were distinct, and for the tire chain market direct indices were available in the number of automobile and motor truck registrations. In estimating the chain markets, possibly the registration figures should have been adjusted for differences in climatic conditions between different sections of the country.

The series of indices which was used in fixing the quotas was much better than haphazard guessing and greatly to be preferred to a complete lack of measurement of the relative potentialities of the various sections of the market. The method that was used was simple and

involved little labor in computation. Nevertheless, it was a rough method. If negroes, for example, were to be excluded from the population figures because of their low buying power, then foreign-born population also should have been excluded. If an objection to that procedure is raised on the ground that many of the foreign-born population live in congested districts where fire protection should be provided by the owners of tenement buildings, the answer is that then the initial basis should have been changed from numbers of population to density of population.

The value of manufactured products was another crude index. A differentiation between general types of industry would have been a desirable refinement, since some types of metal working plants, for example, were much smaller potential users of fire prevention equipment than other types of plants, such as clothing factories, where the value of the output was no greater. The method by which the averages were computed also obviously was faulty, since the average for each state was computed only for those items for which entries occurred for that state, with no recognition of the blank items. The method of weighting also may be questioned inasmuch as the sum of the items rather than the sum of the weights was used in arriving at the average. These comments indicate some of the shortcomings of the methods used.

The breakdown of the total sales estimate that was made by the company was worth while. Further refinement and compliance with certain elementary statistical rules would have rendered improvement in the results that undoubtedly would have been worth the extra cost.

December, 1928

M. T. C.



## GREENOCK HARDWARE COMPANY<sup>1</sup>

### MANUFACTURER—BUILDERS' HARDWARE

**SALES ANALYSIS—***Use of Improved System of Sales Records.* The sales records of a company manufacturing builders' hardware consisted only of customers' cards showing shipments, which lagged from 30 to 60 days behind orders; these cards were summarized annually. In view of increasing competition, the sales manager of the company desired more adequate information as to current conditions. He adopted new records, based on orders received instead of shipments. Customers' orders and salesmen's activities were analyzed on Hollerith machine cards, from which monthly or quarterly summaries were prepared.

**INVENTORY CONTROL—***Use of Improved System of Records.* A company manufacturing builders' hardware found that its inventory records were inadequate because of the slowness of entries and summarizations. The laborious perpetual card inventory was replaced by the easily summarized Hollerith card inventory, which enabled monthly reports of the condition of stocks to be sent to the stock, production, and sales departments, and thus allowed each department to assume its proportionate share of responsibility for stock control. It was anticipated that the use of this plan would make it feasible to reduce stocks from a nine to a six months' supply.

(1926-1928)

The Greenock Hardware Company was one of the largest manufacturers of builders' hardware in the United States. Early in 1926 the company decided that its sales records were inadequate and undertook to develop a more complete and more satisfactory system of records for control purposes. Competition in the industry was keen and the company anticipated a period of even stronger competition. It was the executives' opinion that to be in a position to meet this competition the company needed to have detailed and accurate information as to its sales. In deciding upon records, however, the company's object was to keep only records which actually served a useful purpose. Later, after it had developed a satisfactory system of sales records, the company undertook to improve its control of inventories of finished goods.

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<sup>1</sup> Fictitious name.

The company made all kinds of hardware for use in buildings. There were thousands of items in the Greenock line; for sales purposes, however, the company grouped its products into 20 classes. The chief ultimate market for the company's products was among building contractors. The company sold to hardware wholesalers, hardware retailers, and, chiefly in New York City, directly to large contractors. From certain of the sales records that it adopted, the company learned that 37% of its sales were made to wholesalers; 47% were made to retailers; and 16% were made directly to contractors. The general sales manager stated that the trend was toward a larger volume of sales to retailers.

Wholesalers selling Greenock goods on the Pacific coast were given exclusive territories. Other wholesalers were not given exclusive territories. With few exceptions, however, the company did not sell to more than one wholesaler in a city. In territories where it sold directly to retailers, the company had only one retail account in each city of medium size. In larger cities it had several retail accounts.

The company had three branch offices, at two of which it maintained stocks. At each of these branches there was a branch manager in immediate charge of the Greenock salesmen for that branch. Sales work in the southern, far western, and New England territories was under the immediate direction of sales managers located at the general offices. The company's sales managers were directly responsible to the general manager of sales. There were between 45 and 50 Greenock salesmen. Each of these men was assigned a territory. They visited actual and prospective wholesale and retail customers. They did not visit the wholesalers' customers unless it became apparent that the wholesalers were not providing adequate coverage of the market.

In 1926, when the company decided to improve its statistical control of sales, its sales records consisted merely of customers' cards, one for each customer, showing shipments made. These records were made directly from the invoices. From the customers' cards, statistical summaries were made each year of shipments by states and by cities; the annual summaries were completed six months after the close of the year with which they were concerned. These were the only sales records that the company maintained.

The general sales manager was convinced not only that these records were totally inadequate but also that for control purposes sales should be expressed not in terms of shipments but in terms of orders received. Shipments customarily lagged 30 to 60 days behind orders received. The new records adopted therefore were based on orders received.

Under the new system of records adopted, each incoming order was coded to indicate sales territory, state, size of town, class of customer, whether it was a so-called contract order or a

YEAR	QUARTER	CONTRACT	STOCK	TOTAL	1 CASEMENT ADJUSTERS	2 BOLTS	3 BUTTS	4 CATCHES & TURNS	5 DOOR CHECKS	6 EXIT FIXTURES	7 CASEMENT FASTENERS	8 SASH FASTENERS	9 FLOOR SPRING HINGES
1929	1ST												
	2ND												
	3RD												
	4TH												
	TOTAL												
1930	1ST												
	2ND												
	3RD												
	4TH												
	TOTAL												
1931	1ST												
	2ND												
	3RD												
	4TH												
	TOTAL												
YEAR	QUARTER	10 DOOR KNOBS	11 MORTISE NIGHT LATCHES	12 RIM NIGHT LATCHES	13 TRANSOM LIFTERS	14 MORTISE LOCKS & LATCHES	15 RIM LOCKS & LATCHES	16 PUSH PLATES	17 DOOR PULLS	18 O.L. & C. PULLS & HANDLES	19 PULLEYS	20 ALL OTHER ITEMS	
1929	1ST												
	2ND												
	3RD												
	4TH												
	TOTAL												
1930	1ST												
	2ND												
	3RD												
	4TH												
	TOTAL												
1931	1ST												
	2ND												
	3RD												
	4TH												
	TOTAL												
NO.		STATE											

Exhibit 1: Quarterly sales by product groups.

stock order, and, if a stock order, in which of the 20 commodity groupings that the company had established it belonged. By class of customer was meant wholesaler, retailer, contractor, or unclassified, that is, transient. Contract orders were those received from retailers or wholesalers upon orders which they already had received from building contractors. Frequently a large part of the merchandise included in a contract order was of a special nature. Stock orders were those placed by wholesalers or retailers for goods to be carried in stock. The company decided to make use of Hollerith tabulating machines in drawing up its sales records; and Hollerith cards were prepared daily on the basis of orders



received as coded above. All the company's sales records were drawn from these cards with their various notations.

The company decided to use a card such as that shown here as Exhibit 1 for recording quarterly sales by states, cities, and customers. A separate card was used for each state; for each city with a population of 5,000 or more; for all cities with less than 5,000 population; for each wholesale customer; for each retail customer; and for all unclassified or transient accounts. On each side of these cards provision was made for quarterly sales entries

NAME OF FIRM												ADDRESS																							
RATING																																			
HAVE THEY B.H. DEPT.												GOOD						FAIR						POOR											
NAME AND INITIALS OF B.H. BUYER																																			
NAME AND INITIALS OF SALES MANAGER																																			
NUMBER OF SALESMEN ON ROAD																																			
TERRITORY COVERED BY FIRM																																			
HAVE THEY RETAIL DEPT.																																			
BUY B.H. PRINCIPALLY FROM												QUOTATION																							
OUR SALESMAN HANDLING ACCOUNT																																			
REMARKS																																			
SALESMAN'S CALLS																																			
1926												1928												1930											
JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC
1927												1929												1931											
JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC

Exhibit 2: Wholesaler's personal record card.

for three years. These basic records were available to the general sales manager.

With the card for each customer appeared another card, giving specified data concerning the customer and also listing salesmen's calls by months. The card used for wholesale customers is shown here as Exhibit 2. Among the information listed concerning the wholesale firm were: its rating; a statement as to whether it maintained a builders' hardware department and if it did whether the department was "good," "fair," or "poor"; the number of salesmen employed by the firm; whether the firm

maintained a retail department; and the manufacturers from whom it bought most of its requirements of builders' hardware.

The card used for retailer customers was similar to that used for wholesalers. The information listed was: name of firm; rating; rank as compared with other hardware retailers in the same city or town; whether the firm had a builders' hardware department; the names of the builders' hardware buyer and of the head of the firm; and the names of the wholesalers and manufacturers from which the firm bought builders' hardware. At the bottom of this card also provision was made for listing salesmen's calls.

One of the basic records which the company adopted for the guidance of its sales managers showed salesmen's monthly and cumulative sales for the current year and the previous year, divided according to whether they were contract sales or stock sales. The stock sales in turn were broken down into the 20 classes into which the company divided its products. The form used for this record is shown here as Exhibit 3. A separate sheet was filled out for each salesman in each sales manager's territory and for the territory as a whole. The sales managers were provided with these reports monthly.

Another record, known as the Salesman's Monthly Service Record, was maintained for each salesman. The form used for this record is shown as Exhibit 4. This record showed for each salesman for the current month and cumulatively for the year to date the orders received from his territory; his "service salary," which included salary and expenses; the percentage which the service salary was of the orders received; the average percentage for all the salesmen in the sales district in which the salesman was working; the number of calls made by the salesman; the average cost per call for the salesman; the average cost per call for all salesmen in the district; new accounts added; and old accounts lost. Each sales manager was supplied with these records each month for the salesmen under his direction.

A résumé of the monthly service records for the various salesmen was prepared each month for the general sales manager. This summary record showed, for each month in the current year and cumulatively for the year to date, the percentage which orders received in each of the sales districts was of total orders received and the average cost per sales call for the entire country and also for each sales district.

MONTHLY SALES RECORD																									YEAR _____				
FOR CURRENT MONTH																													
TOTAL BOOKINGS		CONTRACT BOOKINGS		STOCK BOOKINGS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
MONTH	LAST YEAR	THIS YEAR	%	LAST YEAR	THIS YEAR	%	BOLTS	BUTTS	CATCHES & TURNS	DOOR CHECKS	EXIT CASEMENTS	PICTURES	FASTENERS	SASH FASTENERS	FLOOR SPRINGS	DOOR KNOBS	MORTISE LUGS	RIM MITRES	TRANSOM LIFTERS	MORTISE LUGS	RIM LUGS	PUSH PLATES	DOOR PULLS	PULLS & HANDLES	ALL OTHERS				
JAN																													
FEB																													
MAR																													
APR																													
MAY																													
JUNE																													
JULY																													
AUG																													
SEPT																													
OCT																													
NOV																													
DEC																													
TOTAL																													

CUMULATIVE TO DATE																									
TOTAL BOOKINGS		CONTRACT BOOKINGS		STOCK BOOKINGS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MONTH	LAST YEAR	THIS YEAR	%	LAST YEAR	THIS YEAR	%	BOLTS	BUTTS	CATCHES & TURNS	DOOR CHECKS	EXIT CASEMENTS	PICTURES	FASTENERS	SASH FASTENERS	FLOOR SPRINGS	DOOR KNOBS	MORTISE LUGS	RIM MITRES	TRANSOM LIFTERS	MORTISE LUGS	RIM LUGS	PUSH PLATES	DOOR PULLS	PULLS & HANDLES	ALL OTHERS
JAN																									
FEB																									
MAR																									
APR																									
MAY																									
JUNE																									
JULY																									
AUG																									
SEPT																									
OCT																									
NOV																									
DEC																									
TOTAL																									

Exhibit 3: Sales managers' monthly sales record.



SALESMAN'S MONTHLY SERVICE RECORD														YEAR _____	
MONTH	CURRENT MONTH							CUMULATIVE							
	BOOKINGS	SERVICE SALARY	% OF BOOKINGS	AVERAGE % FOR DISTRICT	NO. OF CALLS	COST PER CALL	AVERAGE COST FOR DISTRICT	ACCOUNTS ADDED	ACCOUNTS LOST	BOOKINGS	SERVICE SALARY	% OF BOOKINGS	AVERAGE % FOR DISTRICT	NO. OF CALLS	
JAN															
FEB															
MAR															
APR															
MAY															
JUNE															
JULY															
AUG															
SEPT															
OCT															
NOV															
DEC															
TOTAL															

Exhibit 4: Salesman's monthly service record.

The salesmen themselves were provided with two records based on their own sales performance. These records, shown here as Exhibits 5 and 6, were printed on paper which fitted the notebooks carried by the salesmen. Exhibit 5 was a monthly sales record

SALESMAN \_\_\_\_\_  
MONTH \_\_\_\_\_

COMMODITY GROUPING																				
	TOTAL	CONTRACT	STOCK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
CURRENT MONTH																				
CORRESPONDING MO. LAST YEAR																				
CUMULATIVE TO DATE																				
LAST YEAR TO DATE																				

Exhibit 5: Salesman’s monthly sales record.

showing the salesman’s contract sales and his stock sales, divided according to the 20 commodity classes, for the current month, for the corresponding month of the previous year, cumulatively for

SALESMAN \_\_\_\_\_

TOWN	STATE	FIRM	COMMODITY GROUPING																				
	TOTAL	CONTRACT	STOCK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1ST. Q																							
2ND. Q																							
3RD. Q																							
4TH. Q																							
TOTAL																							
1ST. Q																							
2ND. Q																							
3RD. Q																							
4TH. Q																							
TOTAL																							

Exhibit 6: Salesman’s quarterly record of customers’ purchases.

the year to date, and cumulatively for the previous year to date. Exhibit 6 was used for a quarterly report of purchases of individual firms located in the salesman’s territory. A separate sheet was used for each firm.

The Greenock Hardware Company in 1927 decided to set quarterly sales quotas by territories. These quotas were to be based on the F. W. Dodge Building Statistics. The company figured that of the total amount involved in a building contract a certain average percentage would be represented by hardware. Reports which it received in response to questionnaires sent to customers, contractors, architects, and salesmen, indicated that from  $1\frac{1}{2}\%$  to  $2\%$  of the total was represented by hardware. To be conservative, the company decided to use  $1\%$  as a basis for its sales quotas. From the total value of contracts awarded, the company by use of this percentage was able to compute the approximate amount of hardware that would be required. It then took a certain percentage of this figure as representing its own share of the business. It had been the opinion of the company that sales of hardware lagged about three months behind contracts awarded, and quotas were set on that basis. By plotting sales against quotas based on contracts awarded, however, the company learned that the lag actually was six months instead of three.

The executives were of the opinion that a comparison of actual sales with the sales quotas was in many ways more significant than a comparison of sales for corresponding periods of different years. The company therefore prepared forms for use in making such comparisons. One of these forms, for instance, provided for a quarterly report, by states, of current sales, sales in the previous year, and quotas for the current period. This form also provided for cumulative figures.

Another record which the company decided to maintain was one showing, by months for the current year and the previous year, cumulative selling expenses in percentages of cumulative orders received.

At the close of each year, the company made a comparison of its major accounts in each territory and in the country as a whole, using for that purpose a form shown here as Exhibit 7. On that form the major customers were listed in the order of the size of their purchases in the year just past. Their relative positions in the previous year were shown; their contract and their stock orders in the two years; and the increases or decreases in orders placed in the year just past as compared with the previous year. At the bottom of the form was stated the percentage of the company's



total business in the territory or in the entire country which was represented by the accounts listed.

In addition to the sales records described above, the company maintained several others showing substantially the same information arranged in different ways for the convenience of the executives. It also from time to time drew up special records that were not maintained regularly. In April, 1928, the records had not been in use long enough to have reached their maximum usefulness. However, they already had served to give the company valuable information as to territorial lines that needed to be redrawn and as to the proper direction for sales efforts. As comparable figures became available for a longer period, the company expected the usefulness of its records to increase.

POSITION PREVIOUS YEAR	CUSTOMER	CITY	CLASS	CONTRACT BOOKINGS PREVIOUS YEAR	CONTRACT BOOKINGS THIS YEAR	STOCK BOOKINGS PREVIOUS YEAR	STOCK BOOKINGS THIS YEAR	TOTAL BOOKINGS PREVIOUS YEAR	TOTAL BOOKINGS THIS YEAR	YEAR	
										GAIN OR LOSS	
PERCENTAGE OF TOTAL BUSINESS REPRESENTED BY THESE ACCOUNTS : 000%											

Exhibit 7: Annual two-year comparison of major accounts.

Prior to 1928, the company had controlled its stocks of finished goods by means of a perpetual card inventory. A card was maintained for each item; there were approximately 15,000 cards in all. On these cards, girls employed in the stock department made daily entries of all transactions affecting stocks. The company planned to keep nine months' stocks on hand. The girls making the entries on the cards were expected to report any items the stocks of which had fallen below the specified minimum quantities.

The general sales manager was of the opinion that a nine months' stock of finished goods was needlessly large provided a more satisfactory check could be obtained of goods on hand. The new stock control system which was introduced depended upon use of Hollerith tabulating and printing machines. The old perpetual card inventory was discontinued. Instead, daily entries

of transactions affecting stocks were punched on Hollerith cards. At the close of each month the cards accumulated during the month were sorted automatically and a report for the month was printed on the Hollerith machines. The sheet used for this report was divided into seven columns: catalog number; size or cut; quantity in stock; quantity due from factory; stock bookings; total bookings; and previous year's sales. Three copies of this report were made. One was sent to the stock department, one to the production department, and one to the sales department. Those three departments under the new plan shared the responsibility for control of stocks, although the primary responsibility for checking up upon stocks on hand rested with the stock department.

During the period between monthly reports, no records were available to show stocks on hand. In view of the long stock period, this was not deemed necessary. Under the new system clerical work necessitated by orders received was simplified so that orders could be sent to the factory 24 hours sooner than had been possible under the old plan. Other advantages of the new plan were the greater accuracy of the reports, their visibility, and the fact that three departments could be furnished with the reports. The production department, for example, could use the monthly stock reports in planning output, whereas previously it had had no indication of the condition of the stocks until it received notice that stocks of certain items needed to be replenished. The executives anticipated that use of this plan of stock control would make it feasible to reduce stocks on hand to six months' supply.

COMMENTARY: This case in its broad aspects presents no controversial question. It is rather an excellent example of a plan for securing a type of information which most manufacturers should have but which is still rarely found. Scientific methods can be applied to sales management only when the facts pertaining to the problems to be dealt with are known. Such records as were outlined in this case are the means whereby an individual company can ascertain pertinent facts regarding its marketing operations. A majority of the manufacturing companies in the United States, however, are still no further advanced than the Greenock Hardware Company was prior to 1926.<sup>2</sup>

November, 1928

M. T. C.

<sup>2</sup> Cf. Exton Gear Company, 6 H.B.R. 56; Neyer Tool Company, 6 H.B.R. 211; Tansey Supplies Company, 6 H.B.R. 290; Yonge Hardware Company, page 262, this volume.

## ARTATE MANUFACTURING COMPANY<sup>1</sup>

### MANUFACTURER—STEEL BALLS

SALES CONTROL—*Refusal of Large Order Necessitating Plant Expansion.* One of the largest customers of a company manufacturing steel balls for use in ball bearings wished to increase his monthly purchases from \$15,000 to \$40,000. The acceptance of this increase in business would have necessitated an expansion of plant involving a cost of more than \$50,000. Inasmuch as the customer bought on an unusually narrow margin and would not agree to purchase for a definite period, the company decided not to accept the order. The company was unwilling, furthermore, to become dependent upon a single customer or a single industry.

(1928)

The Artate Manufacturing Company made high carbon steel balls of good quality chiefly for use in ball bearings. Monthly production was approximately 15,000,000 balls and monthly sales amounted to about \$50,000. Early in 1928 the Brom Bearing Company,<sup>1</sup> one of the Artate Manufacturing Company's large customers, then buying about \$15,000 worth of balls from the company each month, asked the company to supply it with an additional \$25,000 worth of balls monthly. The executives of the Artate Manufacturing Company deliberated as to whether they should undertake to meet the additional requirements of this customer.

The Artate Manufacturing Company was one of the few large steel ball manufacturers in the United States that was not affiliated with a ball bearing company. It manufactured only high grade balls and hence did not come into competition with firms making cheaper balls for use in such products as roller skates, where the balls were not subjected to heavy strain. At least 75% of the company's balls were used in bearings that went to the automobile market. The remainder were used in bearings for a variety of products: sewing machines, carpet sweepers, lawn mowers, motor cycles, bicycles, transmission equipment, and various types of machines.

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<sup>1</sup> Fictitious name.



The chief customers for the company's balls were manufacturers of ball bearings. The general manager of the company stated that five of the largest ball bearing manufacturers made their own balls but that there were about fifty manufacturers of ball bearings that did not make the balls. The company made about 75% of its sales directly to those manufacturers by means of two salesmen; those salesmen, in the company's opinion, needed little technical information. The other 25% of the company's sales represented replacements or balls sold to be used for other purposes than in ball bearings. The replacement sales were made in the main through wholesalers, without exclusive territories.

The company did not advertise extensively. It occasionally placed insertions in trade papers and from time to time circularized prospective customers.

Price competition in the sale of steel balls was severe, the general manager stated, especially on sales to large users. Users customarily submitted rigid specifications and in that way protected themselves as to quality. Users generally placed orders 60 days in advance of needs. The general manager of the Artate Manufacturing Company stated that users commonly purchased continuously from the same sources but that in many instances this resulted rather from the fact that those suppliers met competitive prices than from reluctance on the purchasers' part to change sources.

The Brom Bearing Company, which asked the Artate Manufacturing Company to supply it with an additional \$25,000 worth of balls monthly, was a large manufacturer of ball bearings for the automotive industry. Because this firm bought in large quantities and in a few standard sizes, there was severe competition for its business among ball manufacturers and, consequently, the firm was able to buy on an unusually narrow margin. On sales to this firm, the gross margin of the Artate Manufacturing Company commonly was 20% less than its usual margin.

The Brom Bearing Company's desire to obtain a larger volume of balls from the Artate Manufacturing Company arose from the fact that another ball manufacturer from which the Brom Bearing Company had been buying had begun to make bearings that to some extent competed with Brom bearings. The Brom Bearing Company was unwilling to purchase balls from a competitor.

To supply the requirements of the Brom Bearing Company without discontinuing sales to any of its other customers, the Artate Manufacturing Company would have to expand its plant at a cost of from \$50,000 to \$75,000. The company was in a position to make this investment if it appeared practicable to do so. The Brom Bearing Company, moreover, was willing to bear at least a part of the expense. No material reduction in unit production costs would follow from the increased production.

The Brom Bearing Company would not agree to purchase its requirements from the Artate Manufacturing Company for a definite period, even if that company made the necessary expansion of its plant. The understanding would be that the bearing company would buy from the Artate Manufacturing Company so long as that company quoted prices as favorable as those quoted by other ball manufacturers. If the Artate Manufacturing Company did not undertake to supply the bearing company with the additional \$25,000 worth of balls monthly, that company might discontinue all purchases from the Artate Manufacturing Company, either giving the business to competing ball manufacturers or equipping its own plant to manufacture balls as well as bearings.

There were several reasons why the Artate Manufacturing Company was reluctant to expand its plant to meet the requirements of the Brom Bearing Company. One of the most important of these reasons was an unwillingness to become so largely dependent upon one customer. Another reason was the fact that that customer bought upon an unusually narrow gross margin. A further reason was that the customer was selling all its bearings to the automotive industry, an industry upon which the Artate Manufacturing Company already was dependent for a large proportion of its sales.

In view of these facts, the company decided not to expand its plant. The Brom Bearing Company thereupon decided to begin manufacturing balls for its own use. The Artate Manufacturing Company estimated that it would be some time before the bearing company was able to produce all its own requirements and expected in the meantime to be able to obtain sufficient additional business to compensate for the loss of the \$15,000 monthly sales to that company.

**COMMENTARY:** The reasons on which the Artate Manufacturing Company based its decision not to supply the additional requirements

of the Brom Bearing Company were conclusive. The case suggests a further question, however, as to whether the movement for integration of production was not so strong in this industry as to make it likely that the Artate Manufacturing Company eventually would have to engage in the manufacture of bearings or merge its business with that of a bearing manufacturer.

November, 1928

M. T. C.



## LUESIC CHEMICAL COMPANY<sup>1</sup>

### DISTRIBUTOR—CHEMICALS

**SALES ORGANIZATION**—*Segregation of Salesforce by Types of Customers.* A company distributing chemicals already had segregated its salesforce into two groups, one selling to manufacturers, and the other to laundries. In order to improve the effectiveness of its sales efforts, the company decided to segregate the first group of salesmen according to types of industry so far as potential sales volumes warranted, hoping that through this additional specialization each salesman could become more conversant with the technical requirements of his customers.

**PRICING**—*Analysis of Sales Costs Used as a Basis for Price Revisions.* A company distributing chemicals made a cost analysis based on storage, drayage, office and general expenses, which revealed several items being handled at a loss. The company decided that it should make an effort to get competitors to study their costs and to explain to clients the added expenses of rush orders. As a result the prices of some items were increased and a large percentage of rush orders were eliminated without serious loss of patronage.

(1926-1928)

In 1926 the Luesic Chemical Company, a distributor of chemicals, discontinued as far as practical the geographical basis of dividing salesmen's territories and segregated its salesforce according to industries served. In 1928, after an analysis of the cost of handling its products revealed clearly that many items were being sold at a loss, the company sought to improve price conditions by urging competitors to study their own costs of handling.

The Luesic Chemical Company was located in a city of over 1,000,000 population. Its sales volume in 1927 amounted to nearly \$3,000,000, about two-thirds of which were sold on commission and one-third on its own account.

Approximately three-fourths of the total volume was composed of industrial chemicals, both heavy and fine, but chiefly heavy. Of these products there were about 500 items, many of which represented grades of the same products. The remainder of the

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<sup>1</sup> Fictitious name.

sales volume was composed of about 1,500 items sold to the laundry industry. Practically all the company's business was distributed in less than carload lots. About 15% of it was sold on yearly contracts.

The company employed eleven salesmen. Four of them were in the laundry department and called on laundries in the city in which the company was located. Of the remaining seven, one was resident in a city several hundred miles away; he handled all lines. The other six salesmen sold industrial chemicals in the home-office city, and in the outlying territories they sold both laundry supplies and industrial chemicals. Their territories were divided on a geographical basis.

The division between the laundry and industrial salesmen in the home-office city was warranted, the president declared, because of the large volume of sales and the differences in the type of salesmen needed. About 75% of the industrial chemicals and 30% of the laundry supplies were sold in the metropolitan area. The salesmen of industrial chemicals were mostly college graduates with training in chemistry. They were paid a straight salary and an annual bonus, annual earnings of each salesmen averaging about \$4,500. Technical training was highly desirable because a majority of the industrial customers were small companies which employed no chemists and which, therefore, needed scientific advice on the selection and use of chemicals. It was a part of the duty of the salesmen to observe production processes and to give helpful suggestions when so requested by customers. The salesmen's training also enabled them to adjust complaints which arose when customers were not using the chemicals properly or to the best advantage.

The president of the Luesic Chemical Company further stated that technical service was important especially in the chemical industry; for through service a company had the best opportunity to gain competitive advantages. Companies could not compete on quality to any extent because most products were fairly uniform both as between competing brands and different shipments of the same brand. Nor was it desirable to compete on a price basis because the gross margins or commissions were already low on most items.

The industrial salesmen had no regular program as to the frequency of calls on customers. Some customers were called on

once a year and others five or six times. Only a small proportion of the orders were secured by the salesmen at the customers' offices. The salesmen's chief functions were to sell new products or new uses for old products, and to secure new accounts; maintaining contact was a secondary function.

In the laundry industry no special training was required because the problems in the use of laundry chemicals were few and relatively simple. The laundry salesmen, therefore, were employed for their general sales ability in securing customers and maintaining contacts. They were paid a straight salary with an annual bonus.

In 1926 the president of the company came to the conclusion that the industrial market could be served more efficiently by having his salesmen specialize according to industries. He based his decision on what seemed to be the general advantages of specialization, rather than on any specific experiences of other companies with regard to segregation of salesforces. The company was selling to 40 classes of industries. Their problems were too varied for even the better salesmen to become efficient in the use of the chemicals in more than a few of these industries. The industries served in the home-office city, therefore, were divided among the six industrial salesmen as follows:

Paint Manufacturers  
Varnish Manufacturers  
Shoe Manufacturers  
Stock Remedy Manufacturers  
Tanners

Ceramic Manufacturers  
Polish Manufacturers  
Soap Manufacturers  
Metal Workers  
Electroplaters  
Unclassified

Textile Manufacturers  
Public Utilities  
Water Works  
Meat Packers  
Dairies  
Oil Refiners  
Chemical Companies

Extract Manufacturers  
Medicinal Manufacturers  
Disinfectant Manufacturers  
Toilet Goods Manufacturers  
Drug Packers  
Canners

Hardware Companies  
Flour Mills  
Bakers  
Confectioners  
Special Unclassified

Wholesale Druggists  
Pharmaceutical Manufacturers  
Large Special Accounts



The president stated, however, that except in the home-office city the volume of sales to any few classes of industries was not sufficiently large to justify specialization. He estimated that a monthly volume of from \$2,000 to \$25,000, depending on the territory and on the gross margins and commissions, was necessary for the employment of one salesman. In view of this situation, in the territories outside of the metropolitan area, the six industrial salesmen handled both the industrial and the laundry lines, as was the previous practice.

The president of the Luesic Chemical Company was pleased with the increase in the volume of sales following the segregation of salesforce, although no specific part of the increase could be attributed directly to this change in policy. He was of the opinion that specialization was a more effective way of selling, because it permitted more complete knowledge of the details of customers' problems and resulted in closer relationships and steadier business. More of the buyers began to look toward the Luesic Chemical Company as their regular source of supply. Segregation was considered also a more economical way of organizing the salesforce; the president believed that the volume of sales attained in 1928 would have required a larger salesforce had he continued dividing territories on a geographical basis.

A second problem confronting the Luesic Chemical Company was the determination of profitable prices. The president believed that a number of items were handled at a loss and that their prices should be increased or the items discontinued. He began on this problem by analyzing the company's cost of handling heavy chemicals. Since heavy chemicals were low in price as compared to their weights, the cost of handling represented a large proportion of the cost of doing business. The prices varied between \$1.15 and \$8.50 a hundred pounds, with an average of about \$4. The president desired to learn which items he was selling at a loss and the amount of loss.

He based the unit of handling costs on 100 pounds because 99% of the packages handled were either bags, barrels, drums or carboys where net weight amounted to 100 pounds or more. The record of the number of 100 pounds handled was readily determined by adding up the total weights as recorded on shipping tickets. The handling expenses were divided into four groups with subdivisions as follows:

1. Warehouse Expense:
  - a. Rent or its equivalent
  - b. Labor
  - c. Upkeep and power
  - d. Depreciation on equipment
2. Drayage Expense:
  - a. Labor
  - b. Truck fuel and upkeep
  - c. Truck depreciation
  - d. Truck insurance
3. Office Expense:
  - a. Clerical salaries
  - b. Postage, printing, and stationery
  - c. Telephone and telegraph
  - d. Office equipment and depreciation
4. General Expense:
  - a. Insurance on merchandise
  - b. Liability and other insurance
  - c. Taxes
  - d. Legal and professional services
  - e. Losses due to breakage and spoilage
  - f. Credit losses
  - g. Heat, light, and sundries

These items represented all expenses involved in handling the product from the manufacturer to the consumer. The warehouse and drayage expense of the Luesic Chemical Company amounted to 26 cents a hundred pounds, and the office and general expense amounted to 28.7 cents a hundred pounds, a total handling cost of 54.7 cents.

A comparison of this expense with the gross margins or commissions showed that the company was not earning enough on several items to cover even the cost of handling. Most of these items, however, could not be dropped because they were in wide and frequent demand. Prices of these items, moreover, could not be increased by the Luesic Chemical Company because of the uniform price which obtained in the market when it was in equilibrium.

The president believed that at least one of the causes for profitless margins and commissions was the failure of many dealers and manufacturers selling through branch warehouses to learn their real costs. One source of error lay in the fact that

many companies, when estimating the cost of selling a particular chemical, considered the cost of handling as merely the cost of drayage. In the case of the Luesic Chemical Company the cost of drayage on regular delivery schedule was 6.2 cents for 100 pounds, which was only 12% of the total cost of handling. Naturally, the president pointed out, if sellers, in determining prices on particular items, considered drayage as the cost of handling, their prices probably would be too low to cover actual expenses.

Two examples of ruinous price competition were cited by the president of the Luesic Chemical Company. The price of Chemical A was stabilized in 1927 at \$1.56, carload lots, f.o.b. destination. All manufacturers selling in the territory in which the Luesic Chemical Company was located equalized freight, so that the delivered price of all competitors was the same. The resale l.c.l. price was temporarily stabilized at \$1.90 per hundred pounds in quantities of from 1 to 100 bags. Two manufacturers selling Chemical A through branch offices in this market were especially desirous of gaining a large share of the market. As a result of competing on a price basis, the resale price was reduced finally from \$1.90 to \$1.58 a hundred pounds, or two cents above the carload price. In the meantime, the Luesic Chemical Company had dropped Chemical A because of the great loss involved in carrying it.

The second incident related by the president referred to Chemical D. The Luesic Chemical Company at one time had the only local stock of Chemical D, selling it to one large consumer at  $3\frac{1}{4}$  cents per pound. A competitor bought a carload of this chemical and cut the price successively as the Luesic Chemical Company met his price to 3.15 cents, 2.75 cents, and 2.50 cents. At 2.50 cents the manager of the Luesic Chemical Company stated that the gross profit was 50 cents per hundred pounds, a margin which did not cover even the cost of handling, irrespective of other costs and a profit.

The president was of the opinion that sellers of chemicals would not carry price reductions to such great extremes if they appreciated the true cost of handling. In figuring costs of specific items, he did not attempt to take account of other selling expenses because of their variability and the difficulty of allocating them to the various chemicals. Figured on the basis of the annual volume of sales made on its own account, the total operating



expense of the Luesic Chemical Company amounted to 14% of sales; 8% represented handling cost and 6% all other costs. But it was pointed out that selling in less than carload lots was more expensive than merely order-taking because consumers usually had to be shown how to use the products. It was imperative, therefore, that manufacturers and dealers allow a gross margin sufficient for sales promotion.

As an example of a mistake resulting from price competition which did not allow a wide enough margin for proper sales promotion, the president referred to the sale of sodium nitrite for use in curing meats. When sodium nitrite was approved by the Bureau of Animal Industry for this purpose the manufacturers competed keenly for the business. In the words of the manager:

The manufacturers forgot entirely that except in the largest plants, the curing had been done by the same man for the past thirty or forty years. That man was using the formula handed down to him by his father and he realized the responsibility of curing thousands of dollars worth of meat which had been entrusted to him. Furthermore, this "curing man" was usually located in a remote corner of the plant about a half hour's journey over slippery floors and through chilly rooms from the purchasing office entrance. And to make the situation more complicated, the man to be "shown" and "sold" seldom spoke better than broken English and was very reluctant to make any change in his formula.

Any capable chemical salesman, given sufficient time, could have demonstrated that sodium nitrite would effect more efficient results at a saving of nearly 300% over costs of chemicals by the old process. But the manufacturers of sodium nitrite had the price on single barrels hammered down so that there was left not even the cost of handling differentials let alone any provision for sales expense. And so the chemical distributor gave up trying to sell nitrite to the packing trade and little of it is now being used, except by the large packers.

The value of sales service permitted by an adequate gross margin was illustrated further by the experience of an alkali manufacturer who had the foresight to build up a demonstrating organization and to establish a price on his product sufficient to cover the expense of sales demonstration and sufficient to allow a profitable margin for dealers. As a consequence, the brand of this manufacturer far outsold similar competing products offered at nearly one-half the price but handled at a loss by every distributor who carried them.

For the purpose of maintaining prices which not only would cover the cost of handling but which also would allow adequate sales service, therefore, the president of the Luesic Chemical Company was anxious that his competitors, both distributors and manufacturers, should study their costs. He pointed out to distributors particularly that selling prices on less than carload lots had a direct bearing on manufacturers' carload prices f.o.b. works. He stated also that price-cutting tended to ruin the confidence of buyers, making them suspicious frequently of prices which held firm.

As a result of his efforts to get competitors to study their costs, which on the average were similar to his own, the prices of a few items which had been selling at a distinct loss were increased to cover at least the cost of handling, and in some cases, to allow a reasonable profit. The price of Chemical A, for instance, was increased from \$1.58 per hundred pounds to \$2.05 in lots of five 200-pound bags or more, and \$2.25 in less than five-bag lots.

Another benefit which the Luesic Chemical Company derived from analyzing its costs was the reduction of quick delivery expenses. For delivery on regular schedule in heavy trucks the drayage expense averaged 6.2 cents a hundred pounds. But for rush orders, which were delivered in one-ton trucks, the drayage expense amounted to 20.82 cents a hundred pounds. Realization of this wide difference led the president to refuse rush deliveries except to important customers and except in unusual cases. No rigid policy was adopted; rather, judgment was exercised as each order came in. The new practice did not cause any serious loss of patronage; the chief result was that it led buyers to think ahead a day or two instead of waiting until a few hours before the chemicals were needed.

**COMMENTARY:** The segregation of the salesforce selling industrial chemicals by groups of industries, where the density of the market permitted, was far more logical than an indiscriminate assignment of customers or potential customers to the salesmen. It was inevitable that the resulting specialization would increase the effectiveness of the salesmen, and in this case no particular obstacle obstructed the adoption of the plan.

On other aspects of this case Thomas H. Sanders, Professor of Accounting in the Harvard Graduate School of Business Administration, has commented as follows:

"The consequences which followed upon the study of handling costs are a further example of the advantages to be derived from such studies, and of the dangers attending marketing operations which are carried on without the information which an analysis of costs affords. It is not to be expected that every item can be sold at a gross margin which will cover its own handling costs; there will always be present some of the influences of joint costs, where pro rata computations on each item are difficult to make, but where it is satisfactory if the combined results on all commodities are remunerative. Nevertheless the president was probably right in his belief that ignorance of handling costs accounted for most of the cases in which prices were cut below profitable levels; the improved conditions which followed upon his making the facts more widely known would seem to support that view.

"Three matters concerning the cost figures deserve mention. The first is that the reliability of the figures for individual items will be largely governed by the proportion of the expenses which can be charged directly to the items, without arbitrary prorating, which must always be a matter of opinion to a considerable extent. The second point is that this seems to be a case where the greater part of the expenses could be directly allocated, and so affords a basis for reliable conclusions. Thirdly, and most important of all, if most of the costs are direct, in the sense that they are incurred only when business is done and goods are handled, then the Luesic Chemical Company is not driven by the weight of fixed overhead to get business at any price, as a manufacturing company too often is. A distributor so situated should decline to take any part of his business at a loss unless he can with considerable assurance see the compensating advantages."

September, 1928

M. T. C.



## WALDEMAR MACHINE COMPANY<sup>1</sup>

### MANUFACTURER—MACHINE TOOLS AND SHOP EQUIPMENT

**SALES ORGANIZATION**—*Segregation by Types of Products.* A company manufacturing machine tools and also shop equipment such as steel benching and tool racks decided that it was uneconomical to have the machine tool salesmen sell the less expensive, less technical, and more widely used shop equipment as well. The company consequently decided to use manufacturers' agents for that line.

**DISTRIBUTION CHANNELS**—*Use of Manufacturers' Agents in Preference to Direct Sale.* A company manufacturing machine tools and small shop equipment decided that it was uneconomical to have the salesmen for the machine tools sell the minor line as well. Since sales of shop equipment were judged to be too small to support a separate salesforce, the company decided to use manufacturers' agents for that line.

(1925)

The chief products of the Waldemar Machine Company were automatic screw and chucking machines. The company, however, also manufactured a line of shop equipment, including such items as steel benching, stock racks, and tool racks. The company's total annual sales were in excess of a million dollars; of that amount about 10% was represented by sales of shop equipment. In 1925 both the automatic machinery and the shop equipment were being sold by the same salesmen. At that time it was proposed that the company should relieve the machinery salesmen of the responsibility for selling shop equipment and provide some other method of distribution for that line.

Waldemar machines were made in about fifteen sizes and three types. They ranged in price from \$5,000 each to \$15,000 each. Firms producing large quantities of similar parts constituted the market for these machines. It was important that salesmen for the machines have engineering experience. They were expected to visit all large prospective customers several times a year but to devote the major part of their time to firms actually in the market for machinery. The salesmen obtained detailed informa-

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<sup>1</sup> Fictitious name.

tion from such firms as to the particular jobs for which automatic machinery was required and submitted this information to the home office for production estimates and proposals. The salesmen customarily negotiated with production officials and had to be able to advise them as to applications of the machines, small tools to be used with them, and other technical matters. The salesmen were paid salaries and expenses and, as an incentive, small commissions on sales in excess of specified amounts.

After a sale had been consummated and the machinery installed, the company provided a demonstrator to instruct the customer in the use of the machinery. No separate charge was made to cover the cost of demonstration. The demonstration period varied from a few hours to several weeks.

The problems involved in selling shop equipment were totally dissimilar to those involved in selling automatic machines. Items of shop equipment were comparatively inexpensive and the potential market for them was much wider than that for the machines, although machinery users also were prospective customers for shop equipment. Even when the same firm bought both lines, however, different individuals usually were responsible for their purchase. The technically trained salesmen for the machines, moreover, tended to be disinterested in the equipment line.

In view of these facts the company in 1925 decided that thereafter it would not have its machinery salesmen sell the shop equipment. Its shop equipment sales, however, did not seem to be large enough to justify the employment of salesmen for that line alone. The company decided therefore to sell this line by means of manufacturers' representatives specializing in a few lines of industrial equipment. Some of these representatives sold on consignment and some bought the goods outright; the company deemed it important to have local stocks. In general it was the company's experience that sale on consignment gave the best results, since under that method of sale the company had a larger measure of control over its goods.

The company was not able to secure satisfactory representatives in all territories. In those in which it did, however, sales of shop equipment showed increases.

COMMENTARY: This is a clear-cut case for the segregation of the sales organization. The company had distinct markets for the two classes of products. Even where those markets overlapped, in that

some companies were potential buyers of both classes of equipment, the buying personages seldom were the same and in effect constituted different markets. In the market for machines, which were of high unit price, engineering training and a thorough knowledge of the potential performance of the machines, were required; the number of potential customers who were active prospects at any one time was relatively small; negotiations were likely to be prolonged; and several executives in each plant usually participated in reaching a decision regarding purchase. In the market for shop equipment, in contrast, the unit sale was not necessarily so large as for the machines; less engineering skill and a different sort of technical knowledge were needed by the salesmen; the number of potential customers was much larger; and sales negotiations usually did not extend over a long period. These differences between the two markets constituted ample reasons for segregation.

After segregation had been decided upon, there remained the further question of choosing between the employment of salesmen to sell the shop equipment and the utilization of the services of manufacturers' representatives. The relatively small volume of sales per district swung the decision to manufacturers' representatives.

October, 1928

M. T. C.



## POLLOCK COMPANY, INC.<sup>1</sup>

### MANUFACTURER—ELECTRICAL WIRING DEVICES

**SALES ORGANIZATION**—*Segregation of Salesforce by Types of Customers and Products.* A company manufacturing electrical wiring devices, used both in house wiring and as integral parts of electrical appliances and other products, had sold its goods almost entirely through wholesalers and had used the same salesmen for the entire line. The company decided to employ a small crew of sales engineers, competent to give merchandising advice, to sell special items directly to manufacturers requiring them for fabricating purposes. Standard items, whether or not used for fabricating purposes, would continue to be sold through wholesalers; the company's missionary salesmen for the standard line, however, might visit the manufacturers directly.

**DISTRIBUTION CHANNELS**—*Wholesalers Replaced by Direct Selling.* A manufacturer of electrical wiring devices which had sold almost entirely through wholesalers decided to sell special items directly to manufacturers requiring them for fabricating purposes. Standard items would continue to be sold through wholesalers.

(1928)

Early in 1928, it was proposed that the Pollock Company, Inc., a manufacturer of a wide line of electric wiring devices such as switches, sockets, and plugs, should organize a small crew of sales engineers to sell to manufacturers of electrical appliances and other manufacturers requiring special wiring devices for fabricating purposes. At that time the company's sales to appliance manufacturers were being made by the same salesmen who called upon wholesalers, electrical contractors, contractor-dealers, and architects.

The Pollock Company, Inc., always had sold its standard items exclusively through wholesalers of electrical goods. It had, indeed, advertised this fact to the trade. Items of special construction required by appliance manufacturers, however, were not listed in its catalog, and these items the company sold directly to the manufacturers. The electrical appliance business was of comparatively recent growth. In 1928, the company was making about 10% of its sales in that market. Appliance manu-

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<sup>1</sup> Fictitious name.

facturers in many instances required standard items as well as special items. With few exceptions, they bought Pollock standard items from the company's distributors. This also was true of railroads and manufacturing firms using the company's products as equipment. On the few sales of standard items that it made directly to the users, the company did not allow its distributors a commission. The general sales manager stated that there was a growing tendency toward direct selling to manufacturers.

The company, whose annual sales volume was approximately \$8,000,000, in 1928 was selling to 267 electrical wholesalers without exclusive territories. In order to obtain more adequate market coverage, it planned to make large increases in the number of its distributors. In the five years prior to 1928, the company had added 20 distributors. All the company's distributors sold other lines of electrical wiring devices in addition to the Pollock line.

The company in 1928 had 40 salesmen. These men spent the larger part of their time in missionary work with the wholesalers' salesmen, calling on contractors, contractor-dealers, architects, and users. The general sales manager stated that an increasing amount of missionary work was becoming necessary. The company had increased the number of its salesmen from 20 to 40 in 5 years. On their missionary calls these men seldom took orders, and the company had no means of knowing what part of the wholesalers' sales they were responsible for. The wholesalers, however, the sales manager stated, in general did little promotional work; they expected the manufacturer to create demand. In addition to their missionary work, the Pollock salesmen solicited orders for special items, not listed in the company's catalog, from appliance manufacturers and others using wiring devices for fabricating purposes. The company paid its salesmen straight salaries.

In addition to the promotional work done by its salesmen, the company advertised in trade papers and directly by mail to wholesalers, electrical contractors, contractor-dealers, architects, central stations, and manufacturers.

All the company's salesmen were trained in the technical characteristics of wiring devices. The company concluded, however, that the problems involved in selling non-standard items to appliance manufacturers and other fabricators were of a suffi-

ciently special nature to make use of a separate crew of sales engineers for reaching that market advisable. The company, therefore, decided to employ several sales engineers to devote their full time to work with such manufacturers. It was the duty of these sales engineers to discover the special requirements of the appliance manufacturers and other companies using large quantities of non-standard wiring items; to develop models and samples to be submitted to the prospective customers whenever that was desirable; and to demonstrate these models and samples with a view to securing orders. The sales engineers were not to solicit orders for standard items; it was expected that customers visited by the sales engineers would continue to buy standard items from wholesalers. Such customers might also be visited by the company's missionary salesmen who assisted the wholesalers in selling the standard items.

COMMENTARY: The Pollock Company, Inc., had two problems emerging in this case. One was the question of segregating its sales organization into two parts,<sup>2</sup> one of which would continue to sell to wholesalers and the other of which would sell directly to fabricators and other large users. The second question pertained to the continued employment of salesmen on missionary work.<sup>3</sup> Only the first problem is presented as an issue in this case.

The special feature of the company's case as presented was the decision to assign to sales engineers the task of discovering the special requirements of the appliance manufacturers and other fabricators and of developing the models and samples to be submitted to them. In other words, the sales engineers were to perform not only the selling function but also a merchandising function. This arrangement may have been meritorious as a temporary expedient, but eventually it was likely to encounter difficulties. One difficulty to be apprehended was from having two of the company's salesmen call upon the same customers, one to sell staple goods, either directly or as a missionary, the other to sell specialties. The second difficulty likely to arise was that of having the merchandising task divided among a group of sales engineers. Ordinarily, concentrated responsibility for merchandising yields better results than are obtained from divided responsibility. When creative merchandising and selling responsibilities are assigned to the same individual, furthermore, one or the other usually is slighted.

November, 1928 M. T. C.

<sup>2</sup> See Raeburn Electric Company case, 6 H.B.R. 173.

<sup>3</sup> See Maxman-Timball Company, 6 H.B.R. 301; Strength Union Company (B), 6 H.B.R. 297; Tansey Supplies Company, 6 H.B.R. 290.



## CROUCHLEY MANUFACTURING COMPANY<sup>1</sup>

### MANUFACTURER—HARDWARE AND KITCHENWARE

SALES ORGANIZATION—*Segregation of Salesforce by Types of Customers.* A company manufacturing hardware, kitchenware, and special-order goods, all of which it distributed through the same salesmen, decided to maintain a separate salesforce for the special-order goods sold to manufacturers. Salesmen for those goods required more factory and technical training than was needed by the other salesmen.

SALES ORGANIZATION—*Segregation of Salesforce by Products.* A company manufacturing a wide line of hardware, kitchenware, and special-order goods had established a separate salesforce to sell special-order items to manufacturers; its other salesmen sold the complete line. The company decided to segregate the salesforce further by lines of products, with the intention that each man should sell fewer items but should cover a larger territory. It was thought that this policy would increase the effectiveness of the salesmen and impress customers more favorably.

(1925-1928)

The Crouchley Manufacturing Company made a wide variety of products which it sold to wholesalers in various trades, department stores, large unit stores, chain store companies, and other manufacturers. Until 1925 all the company's products were sold by the same salesmen. At that time it was decided that work with manufacturers requiring special goods should be carried on by salesmen not handling the other lines. Later, in 1928, a further segregation of the salesforce by lines of products was contemplated.

The Crouchley Manufacturing Company was a consolidation of five firms. Before this consolidation, which had taken place in 1922, the company had overhauled and thoroughly revised its production methods. In 1928 the company was of the opinion that there was little room for major improvements in its production and accounting practices. As far as marketing was concerned, however, the company recognized a need for improvement, although it held its own marketing program to be at least as sound as those of its competitors.

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<sup>1</sup> Fictitious name.

The company classified its products in three groups: hardware; kitchenware; and special-order goods for manufacturers. Sales were divided fairly evenly among these three groups.

In the company's hardware line there were 3,000 to 4,000 items, many of which were made in several sizes. Among the hardware items were: bright wire goods, including such things as screw eyes and hooks and gate eyes and hooks; coat and hat hooks; wood screws; lock washers; chain adjusters, repair links, and other automobile accessory goods; screw drivers and other small tools; garment hangers; vegetable and bicycle baskets; trash burners, flue stops, and dust pans; horse nose guards; mole traps; ash sifters and scoops. The company also included in its hardware line certain novelties, among which were curling irons and toys. The bright wire goods were sold to manufacturers, such as textile manufacturers for instance, to hardware wholesalers, to hardware chain store companies, and to firms handling building contractors' supplies. The coat and hat hooks were sold to hardware wholesalers and chain store companies and also to wholesalers of contractors' supplies. The wood screws were sold to manufacturers, wholesalers, and chain store companies. Lock washers were sold to automobile accessory wholesalers, to automobile manufacturers, and to manufacturers of farm machinery. Chain adjusters and other automobile accessories were sold to wholesalers of such goods. The screw drivers and other small tools, which for the most part were inexpensive instruments, were sold to automobile, sewing machine, and other manufacturers who resold them as equipment with their products, to hardware wholesalers, and to chain store companies. The garment hangers, baskets, trash burners, horse nose guards, mole traps, ash sifters, and scoops were for the most part sold to hardware wholesalers and chain store companies.

The company made a full line of wire and stamped metal kitchenware, including approximately 2,000 items. These items it sold to hardware wholesalers, large unit retail stores, chain store companies, and house furnishing wholesalers. New items constantly were being added to this line and old items dropped, as many of the products had a novelty appeal. For example, kitchen cutlery with brightly colored wooden handles had replaced cutlery with black or gray handles.

The special-order goods that the company made consisted of wire hardware of all descriptions and of stamped or drawn metal parts to be incorporated in various products. Manufacturers of electrical equipment, of automobiles, of farm machinery, and of almost any other kind of machinery constituted the potential market for this department of the company's business.

Crouchley products were of good quality and the company did not seek to sell on a price basis. In the sale of some items, particularly the bright wire goods, which were standard items, price was an important consideration. This also was true of the small tools. Other Crouchley products, however, were sold on a basis of performance, of suitability in use, or of attractive appearance.

The company classified its customers as A, B, C, chain stores, and manufacturers. Class A customers consisted of unit retail stores of medium or small size. The company did not solicit orders from such firms except, in some instances, in New England, where direct sale to retailers was more common than it was in other parts of the United States. Firms belonging in the A class sometimes sent in orders to the company. Ordinarily the company encouraged such firms to place their orders with wholesalers. Customers in the B class were large unit hardware and house furnishing stores and department stores. Class C customers consisted of wholesalers. The company made its largest volume of sales to customers in this class. The company estimated that the average unit order received from wholesalers was less than \$100.

In 1928 the company had 40 salesmen. Seven of these men were assigned to special lines and one spent half his time on special work. The remainder of the salesmen, however, sold all the company's lines, visiting manufacturers, wholesalers, and large retailers. Sales to chain store companies were made by three of the company's executives rather than by the salesmen. In each of four industrial centers in the United States, Detroit, Philadelphia, Chicago, and San Francisco, the company had a salesman stationed permanently who devoted himself especially to selling the standard lines and specialties to manufacturers. These men, however, also sold to wholesalers and retailers in their territories. The sales manager routed the salesmen. In general each customer was visited eight times a year; some were visited twenty times and some less than eight times.



Until 1925 there had been no specialization in the salesforce. Each salesman was given a territory and was expected to sell the company's complete line in that territory. This included the wire hardware and stamped and drawn metal parts for the manufacturing trade. The salesmen, however, as a matter of fact had secured comparatively few orders for special-order goods. The company had been engaged in making such products for many years and numerous inquiries and orders had been received without solicitation. The company's advertising also had served to elicit some such orders.

In 1925 the company had decided to have certain salesmen spend their entire time soliciting orders for such special goods from manufacturers. In 1928 two men were devoting their full time to this work and one salesman was spending about half his time at it. It was part of the task of these salesmen to observe the types of parts used in various manufactured products and then to convince the manufacturers of the parts that parts which the company could furnish would be more satisfactory. Pressed metal parts, such as the company made, for example, for some purposes were fully as effective, though less costly, than cast iron parts. A manufacturer of oil burners, for instance, at the instigation of a salesman of the Crouchley Manufacturing Company substituted a stamped metal part for a cast iron part that was used in the burners. The stamped part, an executive of the company stated, not only was less expensive than the cast iron part but also was lighter and stronger. In another instance, a maker of cream separators discontinued use of machined steel bowls for the separators and instead used drawn steel bowls made by the Crouchley Manufacturing Company. About half the company's sales of special goods to the manufacturing trade resulted from such work as this on the part of the salesmen who specialized in that work. Some orders came in without solicitation and the salesmen handling the full lines also obtained some orders for special goods. The company's sales in this field had increased substantially after the special salesmen were assigned to the work. Those salesmen required more factory and technical training than was needed by the other salesmen, for they were called upon to discuss manufacturing problems with technical men in customers' organizations, and they also needed to be able to tell just what things the company was equipped to make.

In addition to the special salesmen assigned to the sale of fabricating parts, the company after 1925 had established a force of five specialty salesmen who spent most of their time introducing new items that the company placed on the market. Especially in its lines of kitchenware and novelties, the company constantly was adding new items. The sales manager and salesmen observed market trends and made suggestions as to products to add and as to modifications to make in existing products. The company budgeted the time spent by its engineering department, salesmen, and other employees in developing and introducing new products.

When a new item of any importance was added to the company's line, one or more of the five specialty salesmen were assigned to its introduction. At one time, for example, the company added to its line of kitchenware a kitchen utensil possessing unique features. For about three months one of the specialty salesmen visited large wholesalers, although those firms regularly were visited by other Crouchley salesmen, to introduce the new item to them. At the end of six months the new item was added to the lines sold by the regular salesmen.

The company employed no missionary salesmen to solicit orders from retailers for wholesalers' accounts. It did prepare display racks for use by retailers, however. These it sold at cost. The sales manager and specialty salesmen sometimes arranged displays in retailers' stores. The company advertised in trade papers and in a few household magazines. It also advertised directly by mail.

The company sought especially to assist the wholesalers and retailers handling its products by its merchandising practices in adapting its products to market requirements. In 1928, for example, it added an entire new line of kitchen utensils that could be sold to wholesalers at a price that would permit them to resell at such a price that unit retailers could sell the individual items in the line at the same prices that chain stores were charging for corresponding items in a similar Crouchley line. The new line was less costly to manufacture, but was stated to be fully as satisfactory in use as the older line sold by chain stores.

In 1928 the vice president of the company proposed that the salesforce should be further segregated by lines. In his opinion the salesmen could not reach their maximum effectiveness with so many items to sell, even though each item in itself was

simple and required little effort to master. He also thought that a more favorable impression was created upon customers when a salesman had comparatively few items to sell than when he had dozens or even hundreds of items to offer. Under the existing arrangements, moreover, whereby each salesman sold the full line, there was a tendency for the salesmen to concentrate on particular items and to neglect others. It was the vice president's plan to increase the size of the territory covered by each salesman and to decrease the number of items that he sold. In this way, three or four Crouchley salesmen in many instances would call upon the same customers. The only disadvantage that the vice president could see in this plan was the increased travelling expenses that would result. This disadvantage, he believed, would be far more than offset by the increased sales effectiveness that would follow the reduction in the number of items each salesman was called upon to be familiar with.

The vice president stated that most of the large wholesale firms and department stores to which the company sold had different buyers for various of the lines that the company manufactured. The division of the buying task by merchandise groupings varied with different firms. The vice president was of the opinion that a general classification for the company's goods as represented by the division of the buying task in customers' organizations was: hardware; house furnishings; notions; toys; automobile accessories; furniture. Ordinarily, when visiting a customer's organization, a Crouchley salesman endeavored to see all the buyers interested in the Crouchley line. The vice president did not anticipate that any customers would object to a plan whereby several Crouchley salesmen, instead of one salesman, visited them.

The vice president had not decided upon a feasible division of salesmen by products. But he anticipated that a plan of at least partial salesforce segregation would be prepared and put into effect shortly.

COMMENTARY: The merits of employing special salesmen for soliciting special-order work, where technical sales knowledge was required, and of employing other special salesmen to introduce new products to regular customers are apparent in this case. The wisdom of the contemplated plan of segregating the regular salesforce by classes of products, however, was not proven. Such a plan would have resulted in duplication of travelling expense. Since expert technical knowledge



was not required for selling each line, furthermore, the gain from specialization in that direction was not clear. There was little difference between the lines in buying seasons, and, therefore, a customer frequently would be ready to buy one line at just the time that one of the company's salesmen for another line visited him. It would have been difficult for the salesman to refrain from taking the order for whatever line the customer was ready to buy; hence the specialization probably would soon have broken down. Unless there are strong technical factors or a marked difference in buying seasons, segregation of sales-force by products, when the products are sold to the same customers, seldom is practicable.

November, 1928

M. T. C.

## WHEELER GEAR COMPANY<sup>1</sup>

### MANUFACTURER—GEARS

SALES ORGANIZATION—*Employment of Additional Salesman to Supplement Competitive Bidding.* The sales volume of a company which manufactured gears upon customers' orders had been declining. The sales manager attributed this to the fact that other gear manufacturers, which placed bids in competition with the company, were represented by a proportionally greater number of salesmen. The sales manager consequently recommended that the company, which customarily conducted most of the sales negotiations by mail, employ an additional salesman, not to give technical advice, but merely to provide personal representation.

(1928)

The Wheeler Gear Company manufactured gears as fabricating parts of machinery of various kinds. The company was one of the largest in the industry, having a sales volume in 1927 of \$1,250,000. This volume was somewhat below the average for the previous four years. The sales manager of the Wheeler Gear Company attributed the decline in sales chiefly to the fact that competitors' salesmen were calling more frequently on gear buyers. The Wheeler Gear Company employed one salesman; the sales manager proposed that another one should be employed.

The Wheeler Gear Company did not produce for the replacement market; all its gears were sold directly to machine builders. The company manufactured entirely upon specifications submitted by buyers and hence carried no finished stocks. Individual gears varied in diameter from 1 inch to 100 inches and in price from 30 cents to \$100, depending on size, quantity, and quality. Most orders ranged between \$100 and \$10,000. A firm buying gears typically placed its orders three or four times a year and from one to three months ahead of time for delivery. The Wheeler Gear Company sold to about 500 manufacturers; 66% of its sales in 1927 were made in one state and 90% were made in 6 states.

The company's total selling expense in ratio to net sales was approximately 4%. The advertising appropriation was

<sup>1</sup> Fictitious name.

usually about 1% of net sales. Two-thirds of this was spent for trade paper advertising and the remainder was used for direct mail advertising. No catalog was published inasmuch as the gears were made to meet each individual customer's needs. The trade paper advertising sometimes stressed the quality of the Wheeler gears by explaining how they were made; but more often it showed how Wheeler gears increased the efficiency and reliability of the machines in which they were used. On its direct mail list the company had about 3,000 manufacturing firms to which it had been sending 30-day mailings for over 10 years. Material for these letters was prepared by the engineering staff, but the actual sales letters were written by college women.

The company employed one salesman and the sales manager spent about one-quarter of his time in calling on customers. The larger customers were called upon about six times a year; others were seen less frequently. There were a few smaller customers who had been buying from the company for 10 to 20 years and who had not been called on at all. Although gears had to be made to meet the particular requirements of each buyer, his needs could be determined from blue prints and specifications. It was customary for most large manufacturers and some small ones to buy gears after receipt of competitive bids, but the Wheeler Gear Company had such a well-established reputation that about 70% of the number of orders that it received were placed without price quotations being asked for. These orders, however, were from the companies whose gear requirements were small.

During the several years preceding 1928, the Wheeler Gear Company had noticed that sales resistance to its products was increasing. This was evidenced by the fact that a growing number of orders were being lost, when the customers sent in blue prints for estimates but did not place orders with the company. The common reason given by companies for rejecting the bids was that the Wheeler Gear Company's prices were out of line. But the sales manager believed that generally the cause of failure was the fact that other gear companies had salesmen at the buyer's plant; whereas usually his company was not represented. In recent years competitors had been sending salesmen to gear buyers with increased frequency; the sales manager of the Wheeler Gear Company believed, however, that their selling expense ratios had increased as a result and that the expense ratio



of his company was about half that of most other gear manufacturers. The value of having a salesman at the plant of a prospective customer was chiefly the difference between being represented personally and being represented by mail. The calls of salesmen were not for the purpose of rendering technical service; for this was obtained through the mail from the gear manufacturer's engineering staff.

The relative lack of personal representation was thought by the sales manager of the Wheeler Gear Company to be the cause of the reduction in the company's sales volume in 1927. The company's plant in the same year had been working at 66% of its maximum capacity. Although the company's net profit had been satisfactory, and although the company was desirous of keeping its selling expense low, the sales manager recommended the employment of an additional salesman. The salary of a new salesman probably would be about \$300 a month and his traveling expenses about \$200.

COMMENTARY: The proposal of the Wheeler Gear Company to employ an additional salesman had plausible arguments in its favor. The loss of orders to competitors who employed travelling salesmen more extensively constituted evidence that deserved careful weighing. It is not safe to infer from the facts stated in the case, however, that the company's sales problem had been fully diagnosed.

May, 1928

M. T. C.

## ELLIOTT-FISHER COMPANY

### MANUFACTURER—ACCOUNTING-WRITING MACHINES

**SALESFORCE MANAGEMENT**—*Training Course to Decrease Rate of Turnover of Salesmen.* A company manufacturing and distributing accounting-writing machines had a high rate of turnover among new salesmen. This the company attributed to its lack of a comprehensive training program for salesmen. An analysis of conditions resulted in the adoption of a standard sales course, conducted on the correspondence school plan, which enabled a new salesman to begin work with less technical knowledge than formerly and increased the beginner's income during the tutorial period.

(1923)

The Elliott-Fisher Company was represented by several hundred salesmen employed in sales offices located in about 90 of the leading cities in the United States and Canada. In 1923, the company began to develop a standard sales training course with the particular purpose of shortening the period of low earnings for new salesmen and thereby decreasing the rate of turnover of salesmen.

The Elliott-Fisher Company, with works at Harrisburg, Pennsylvania, was the largest exclusive manufacturer of accounting-writing machines utilizing the flat writing surface principle. The machines were marketed by the General Office Equipment Corporation. The United States and the Dominion of Canada, comprising the domestic territories, were divided into a number of large geographical districts, which were supervised by district managers. A district was composed of a group of local offices, located in the larger cities, each of which was managed by a local office manager, who was responsible to the controlling district manager. At each local office there were one or more salesmen. In countries outside of the domestic field, the machines were marketed through dealers and sub-dealers, located in principal cities of the world.

The Elliott-Fisher line included both accounting machines and writing machines that were supplied for either automatic electric or manual operation. They did not compete, however,

with letter-writing machines, nor with those used exclusively for adding.

The writing machines, which were for writing only, were made in three styles for various purposes, as follows: writing machines, for cut forms; automatic feed machines, for continuous length forms; and book recording machines, for bound books. These writing machines were manufactured in a number of sizes with variations to meet the application requirements of different record-writing problems.

The accounting machines were made in two styles: simplex accounting machines, for writing, adding, subtracting, and computing vertical column totals; and universal accounting machines, for writing, adding, subtracting, and computing vertical column totals and simultaneously computing cross-balances or totals. These accounting machines could add, subtract, and total in any number of columns up to 29; the computing was accomplished automatically as the figures were typed. As with the writing machines, the accounting machines were supplied in a number of variations so that they could be applied to the individual requirements of each application. The adaptability of these machines for a wide variety of uses and for writing on practically any kind of form was a feature stressed by the Elliott-Fisher Company.

The machines were used by thousands of firms representing over 400 different types of business enterprise. The chief types of customers were as follows:

Manufacturers, wholesalers, and retailers of all kinds of commodities.

Transportation companies: steamship, railroad, traction, bus, and taxicab lines; express and freight forwarding companies.

Other public utility companies: such as gas, electric, and water companies; telephone, telegraph, cable and radio companies.

Financial institutions: banks and trust companies, building and loan associations, finance corporations, brokers, insurance organizations, and real estate companies.

Government departments: municipal, township, county, state, and Federal.

General lines: such as hotels, clubs, associations, restaurants, theatres, contractors, laundries, cleaners, educational institutions, and the like.

The wide application of the several Elliott-Fisher machines in the types of business activity made it necessary for the salesman



to have a knowledge of accounting principles and practice, together with a familiarity with various classes of records and forms used in different businesses. The sales training problem was stated by the educational director as follows:

"In order to sell successfully, each salesman must be trained to a point where he is able to gain entrée to his prospects' offices; to make complete studies of his prospects' present record-writing methods and routine; to prepare practical, time-, labor-, and money-saving solutions to the problems found; to present intelligently and clearly these solutions to the prospects involved; to sell the machines associated with the solutions; and then, to handle properly all details connected with installations so as to insure complete satisfaction on the part of the customers.

"Thus, it will be noted that the salesman must be both a salesman and a practical, constructive accountant. Although a knowledge of technical accounting is helpful, it is not essential. As a matter of fact, the most important qualification is that of salesmanship. The necessary accounting knowledge can easily be taught; but, unless the man is a salesman, accounting knowledge is of no avail."

For over 30 years prior to 1923, the development of the Elliott-Fisher Company's field organization had depended entirely upon such methods as occasional centralized schools for new men; centralized schools, now and then, for managers of sales offices; sales conventions; occasional educational meetings in the field supervised and directed by general office representatives; sporadic dissemination by mail of educational data; and other activities, all fundamentally the same in that none of them had been a part of a comprehensive and permanent program of education. As a consequence of the absence of an organized training procedure, there had been long intervals during which no definite educational work was done. During those periods, the development of the men had depended almost entirely upon such knowledge as could be imparted to them by word of mouth by the managers of the offices or districts in which they were serving; and, furthermore, the acquisition of selling and product information depended largely on the initiative and efforts of each new salesman.

These unorganized training methods, the educational director stated, had been "quite adequate in the days when the total number of field representatives was small; but as the number

increased, bringing with it the necessity of training new men daily, it was evident to all concerned that more effective training methods were an urgent necessity. This necessity was particularly pronounced because of the noticeable effect upon the company's business caused by these inadequate training methods. But more important than the effect upon business was the full realization of the gross injustice to the individual of handicapping his earning capacity through improper training methods,—a condition for which he was not responsible and over which he had no control.

“Before the adoption of the Elliott-Fisher standard sales procedure, it was customary to start the training of each new salesman by having him devote six to eight weeks to a study of Elliott-Fisher products and their application. During this period he received very little or no contact with field work and as a result his earnings suffered. Because of unsatisfactory earnings his interest, enthusiasm, and morale dwindled; and, if his finances were in bad condition, it became necessary for him to seek immediate relief by resorting to a salary-paying position where the future possibilities were in most instances considerably less attractive from a remuneration standpoint. This condition naturally resulted in a heavy turnover of salesmen.

“Knowing the cause of this turnover it was evident that some training plan had to be devised under which new men could be placed in a sales earning position much sooner. Since the acquisition of product information required considerable time, it was apparent that the teaching of such data had to be fitted into each man's training at some point other than the beginning.

“With these thoughts as a basis, a complete analysis of the sales training problem was made and as a result the Elliott-Fisher standard sales procedure was evolved and set up as the first item of study for each new salesman.”

The standard sales procedure constituted the first division of the new training course and product information the second division. The product information described all basic equipment in the Elliott-Fisher line with comprehensive information concerning the underlying principles and advantages of their commercial application. The selling principles embodied in the standard sales procedure section incorporated every major step in proper

sequence that was taken in making Elliott-Fisher sales originating with canvass calls,—the usual origin of Elliott-Fisher sales.

The course was conducted on a correspondence school basis, supplemented by personal instruction given by the local managers. The control was maintained at the general sales office where a sales educational division handled the enrollment of each student; maintained all student records; and corrected, graded, credited, and returned with comments all course work submitted. The manager of each local office was held strictly accountable for the progress, in accordance with a time schedule, of all students under his jurisdiction; and through the medium of general office statistical records, delinquency could not exist without immediate official detection and resultant action.

The standard sales procedure, the salient feature of the new system, was designed to cover the steps in making a sale with an explanation of how to accomplish them. Hundreds of sales starting with canvass calls were analyzed to find these sales steps, and several years were devoted to practical field experiments to determine the best methods of accomplishing each. The procedure was then adopted as standard and used as the first educational material for each new man. The steps in the procedure were as follows:

### 1. *The Approach*

Objectives:—

- a. To interview the official with the power to authorize the adoption of Elliott-Fisher equipment.
- b. To obtain *his* permission to study the office records and routine.
- c. To secure *his* commitment to purchase if proof can be established that the results to be secured will warrant the investment.
- d. To maintain contact with this official.

### 2. *The Analysis*

A study of the prospect's present methods to determine how Elliott-Fisher machines may be applied to his advantage.

### 3. *The Application*

The preparation of the solution to the prospect's requirements, including the specifications of the machines and their prices, the required forms and routine, and the facts necessary to prove.



#### 4. *The Presentation*

The presentation of the solution with a machine demonstration.

#### 5. *Obtaining the Order*

Closing the sale.

#### 6. *Continued Sales Service*

Preparing for and making the installation with all supplementary service essential to complete satisfaction and resultant additional business.

The use of the standard approach was the feature which enabled salesmen to earn a satisfactory income in a relatively short period. The manner in which the new method shortened the period of low earnings was explained by the educational director as follows:

"The first sales step, namely, the approach, is arranged in standard wording which the salesman commits to memory. Its four objectives are accomplished without discussing Elliott-Fisher machines, their features, what they do, or how they do it. All such discussion is reserved until the time of presenting and obtaining the order—the time when such data is needed to close the sale. Therefore, the new man can learn how to execute the approach without any product knowledge, which makes it possible for him to engage in field work on a constructive basis within three to six days. Naturally, he is unable at first to accomplish the remaining sales steps; but wherever he succeeds in gaining the four objectives, his manager carries on for him and in his presence. Thus, the new man receives the use of the knowledge of his manager and is, therefore, immediately in the same relative earning position as the experienced salesman. In addition, because of the new salesman's financial interest in the transactions which he has originated in his own territory, he is keenly observant of the details of every succeeding activity. This enables him to grasp easily the principles which he studies as he continues his sales course.

"Incidentally, the successful application of the principles of the approach and the accomplishment of its objectives is a test of salesmanship, and because of this fact it is possible for each manager to judge every new man's sales ability in a comparatively short time.

"The details of the execution of the sales steps following the approach vary with each transaction and for that reason standard language has not been adopted, except for such phases of the presentation as cover selling descriptions of machine features. The fundamental principles underlying all transactions are, however, the same, and the routine and the procedure for each step has been standardized and fully explained from the angle of how to accomplish each. The study of the sales procedure is followed by product information concerning the application of Elliott-Fisher to record-writing requirements and to fundamental accounting problems."

The educational director stated that the development and application of the standard sales procedure, "combined with the decentralized training by the local office and the district managers, preserved the interest and enthusiasm of the salesmen by placing them, within approximately one week, in a money-earning position." Thus, the major cause of resignations was practically eliminated and the rate of turnover of salesmen considerably decreased. And, further, the new training methods reduced to a minimum the loss of sales resulting from lack of knowledge and from improper approach.

COMMENTARY: The plan adopted by the Elliott-Fisher Company was the result of a careful diagnosis of its problem of decreasing the rate of turnover of salesmen. It ascertained one of the major causes which led salesmen to leave its employ prematurely and then worked out its program for removing the cause. From the general organization standpoint, three features of this program are particularly to be noted: first, the coordination of instruction by correspondence from the home office with guidance by the district and local managers; second, the placing of responsibility on the local managers for insuring the progress of the salesmen during the tutorial period; and, third, the exercise of supervision at the home office to make certain that the program was carried out in general and in detail.

November, 1928

M. T. C.

## KAWNEE SUPPLY COMPANY<sup>1</sup>

### MANUFACTURER—HOTEL AND RESTAURANT EQUIPMENT

**SALESFORCE MANAGEMENT**—*Standard Allowances for Old Equipment Taken in Trade.* Salesmen of a company manufacturing machinery and equipment for hotels, restaurants, markets, and stores tended to give excessive allowances on old equipment taken as part payment for new equipment installed. The company decided to set standard minimum allowances for trade-ins. Any allowance given in excess of this standard was charged against the salesman's commissions. If the traded-in equipment was sold within a reasonable period at a price sufficient to cover the excess allowance, the charge against the commission account was cancelled; otherwise the salesman bore the loss. A large part of the company's sales were made for deferred payments.

**PRICING**—*Determination of Allowances for Used Equipment Taken in Trade.*

A company manufacturing hotel, market, and store equipment made many sales involving the acceptance of used equipment in trade. It was faced with the question of whether to establish sufficiently high prices to permit large trade-in allowances or to allow only what such equipment was actually worth and keep prices of new equipment correspondingly low. The latter policy was adopted.

The Kawnee Supply Company was a large manufacturer of hotel and restaurant equipment, butchers' tools and machinery, and store fixtures. Among its products were refrigerators, refrigerator show cases, cook ranges, shelving, coffee urns, meat choppers, and a large number of small items. With its own products the company completely could equip a retail meat market or a hotel kitchen, for example. Grocery stores, drug stores, and restaurants also were customers, as well as various industrial companies and institutions.

A large proportion of the company's sales were made under a plan of deferred payments, and many sales involved the acceptance of used equipment in trade. Under the existing marketing arrangements there was a tendency for the company's salesmen to make too large allowances on used equipment and to neglect the sale of that equipment. In order to improve this situation, the

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<sup>1</sup> Fictitious name.



company, in 1928, proposed to establish standard allowances for pieces of used equipment and, when the salesmen exceeded those allowances, to charge the amount of the excess allowances against the salesmen's commission accounts.

In 1928 the Kawnee Supply Company had 32 salesmen with exclusive sales territories. Those salesmen in some areas sold directly to users and in other areas sold to jobbers; in territories where the company sold through jobbers, the jobbers provided installation and other service for customers. Until 1926 the company had sold directly to users only within a radius of 200 miles of its plant. After that date, however, the company increased its direct sales work greatly, and it planned eventually to sell directly throughout the whole country. The country expected to increase its salesforce to 75 men in 1929.

Sale through jobbers was not deemed satisfactory for the company's products. It was the sales manager's opinion that for the best results Kawnee salesmen must understand the problems of users and work out plans with them. One of the company's largest markets, certainly its most extensive market, was represented by unit retail stores. Chain store companies also were beginning to buy Kawnee equipment, although they originally had for the most part bought cheaper makes of equipment. The success of the chain stores, the sales manager of the Kawnee Supply Company stated, had tended to discourage unit retail stores from replacing old equipment with new. For them to compete successfully with the chain stores, however, it was essential, in the sales manager's opinion, that they be modernized and adopt the progressive practices of the chain stores. It consequently became part of the Kawnee salesmen's work to advise retailers as to effective store layouts and as to methods of marketing. Such work required direct sales efforts; jobbers' salesmen could not be depended upon for work of this type.

The sales manager held weekly sales meetings at which the problems of unit retailers were discussed and instruction was given in methods of assisting the retailers. It was part of the salesman's task to ascertain, before seeking to sell equipment to a retailer, particularly to a retailer just opening a store, whether it was likely, in view of the location, competitive stores, and so on, that the retailer would be successful. Inasmuch as most of the company's sales of equipment in that market were made for deferred

payments, it was contrary to the company's interests to take orders from customers who would be unable to make payments regularly. When it appeared that the purchase of new equipment would benefit both the user and the company, the Kawnee salesmen discussed the matter with the retailer and, if possible, prepared plans showing what new equipment was needed and just where it could most effectively be placed in the store. The salesman also gave the retailer suggestions as to ways of increasing his business. Sometimes, for instance, it was pointed out that this might be accomplished through the introduction of a meat department. This plan of constructive help to the merchants had been developed by the company since 1926.

About 50% of the company's sales were made for cash and about 50% were made for deferred payment. The proportion of sales made for deferred payments had shown a tendency to increase and the company expected it to increase even further. All the supplies, such as tubes, choppers, knives, and plates, were sold for payment in 30 days, and some sales of equipment were made on a cash basis. Chain store companies, hotels, institutions, and industrial companies bought for cash. Retail stores, on the other hand, commonly paid for equipment on the installment plan. Single items of Kawnee equipment ranged in price from a few dollars to a few thousand dollars. Single orders in some instances had amounted to from \$80,000 to \$90,000. The typical orders placed by customers making deferred payments amounted to less than \$5,000.

The company gave a cash discount of from 1% to 5%, the percentage depending upon the amount of work which had been involved in making the sale. The company's usual sales terms for persons buying on the installment plan were an initial payment of 40% of the total amount and the remainder in 12 equal monthly installments. The company had a one-price policy which it adhered to strictly. It did, however, make variations in its terms for installment sales in order to meet the special needs of its customers. It was the company's policy to make the initial payment large enough to cover the direct sales and service expenses, that is, commissions and erection, freight, and hauling costs. On a refrigerator selling for \$800, for instance, the company figured an erection cost of \$75, a cost of \$75 in the event that it was necessary to remove the equipment, a commission of \$80,

and an indefinite cost for freight and drayage, possibly amounting to \$100 or more. Customers ordinarily were expected to pay all these costs except salesmen's commissions, but ordinarily they asked to have them added to the total amount of their accounts, to be paid in monthly installments. The large initial payment also tended to keep overdue notes at a minimum, since it discouraged persons with inadequate financial resources from purchasing.

For the balances due after the initial payment, the company took customers' notes. Ordinarily no interest was charged on these notes. The company's prices were adjusted so that it was unnecessary to charge interest on notes. If, however, as sometimes happened, customers insisted upon the company's paying erection and freight costs, the company charged interest on the notes. It was the company's experience that its customers as a rule disliked the notion of interest and were more favorably impressed by slightly higher prices without interest on deferred payments than by lower prices with interest. The company experienced little trouble with overdue accounts and seldom found it necessary to repossess equipment.

The company might have rented its equipment to users who were not able to purchase outright, but it did not seriously consider this plan. The sales manager was of the opinion that a rental plan was preferable only in case expert servicing was required to protect the reputation of the equipment, or in case supplies were sold to be used in connection with the equipment.

Inasmuch as about 60% of its sales involved the acceptance of used equipment in trade, and since customers having used equipment to trade in tended to demand more for that equipment than the company could obtain for it when reselling, the company was faced with the question of whether to include an allowance for used equipment in its prices and to make large allowances for such equipment, or to allow for used equipment only what it actually was worth and keep prices correspondingly low. Some customers apparently laid more stress on allowances than on prices, while others were more concerned with low prices.

The second plan was the sales manager's preference. The company consequently made little allowance for used equipment in its prices, and tried to allow customers no more than the equipment was worth. In reselling used equipment, the company sought to obtain prices sufficient to meet all the expenses involved in the



sales. Used equipment ordinarily was brought to the factory and put into first rate condition before being resold. Labor, material, and overhead costs were charged against the equipment. As a rule the company had experienced neither profit nor loss on actual sales of used equipment. It had, however, in order not to sell equipment at a loss, accumulated large stocks of the equipment. The average life of Kawnee equipment that was sold for deferred payments was 10 years, with a somewhat higher rate of depreciation in the first year than in subsequent years. Allowances that the company made for used equipment customarily ranged from 15% to 25% of the original prices.

The problem of used equipment had been growing increasingly troublesome since about 1923. When the company first introduced refrigerator display cases, for instance, customers had not used such equipment previously and hence did not have old refrigerator display cases to offer in trade. The same thing applied to various other items. There was a growing tendency, moreover, for the company's competitors to make unduly large allowances for used equipment. The sales manager was convinced that certain of the company's competitors suffered a loss on all their used equipment sales. The equipment made by most of the company's competitors was stated to be inferior in quality to Kawnee products and hence was lower in price.

Under the existing arrangements, Kawnee salesmen had a large measure of freedom in setting allowances for used equipment, although all contracts entered into had to be approved at the home office. The salesmen, all of whom were on a straight commission basis, were paid a commission on the amount of each sale less the trade-in allowance. Then, when the used equipment was sold, a commission was paid on that transaction. The rate of commission was the same on new and used equipment. The rate varied for different classes of products; on the higher priced items it was 10%. The full amount of the commission on a sale of new equipment was not paid the salesman immediately. Seventy per cent was paid when the order was accepted, and the remaining 30% was credited to the salesman and paid when the account with the customer was closed. Any of the salesmen were privileged to sell any of the used equipment taken in trade.

There was a constant tendency for the salesmen to give larger allowances than were warranted. There also was a tendency for

them to show little interest in selling used equipment or, when they did sell it, in obtaining fair prices for it. It was to remedy this situation, in part at least, that the company proposed to revise its plan for dealing with used equipment transactions.

Under the plan proposed, the company was to establish standard allowances for the classes of equipment that it was likely to be offered in trade. The standard allowances would be in the nature of minima rather than maxima. Used equipment in first rate condition would be entitled to larger allowances, to be determined at the discretion of the salesmen. Whenever a salesman allowed more for a piece of used equipment than the standard allowance, the amount of the difference was to be charged against his commission account. He then would be given 60 days in which to dispose of the piece of used equipment. If he sold it at a price sufficient to cover the allowance and the costs charged against the equipment, the charge against his commission account was to be cancelled. If, on the other hand, the price obtained was insufficient, the amount of the insufficiency would be deducted from the salesman's commissions. If the salesman who had accepted the equipment failed to sell it within the 60-day period, any of the salesmen would be free to sell it, and any deficiency in the price obtained would be charged against the account of the first salesman. If a salesman gave the standard allowance on a piece of equipment, no charge would be made against his commission account no matter what price the used equipment brought. In instances in which salesmen exceeded the standard allowances, and so themselves had a stake in the used equipment, they would be permitted to determine just how much reconditioning was to be done.

The company decided to put this plan into effect.

**COMMENTARY:** The Kawnee Supply Company's decision to adopt a system of standard allowances for used equipment was commendable. It was far better to standardize trade-in allowances than to increase pieces in order to permit wider trading margins. The provision whereby the salesmen were permitted to vary the standard allowances at their own risk, was a compromise, which may have been warranted as expedient. That provision would be successful only to the extent that the penalty proved to be a deterrent against excess allowances. In other words the permission for the salesmen to give excess allowances provided they bore the loss involved was warranted only by the expecta-

tion that it would not be used; for if the salesmen were to receive sufficiently large commissions to make it possible for them to take substantial deductions from their earnings to cover excess allowances on used equipment, their commissions would be too large, selling costs too high, and the effect on prices inherently the same as if a wider margin for trading were allowed in the list prices of new equipment.

February, 1929

M. T. C.



## DOWNAM MANUFACTURING COMPANY<sup>1</sup>

### MANUFACTURER—METAL HOSE

**SALES PROMOTION**—*Direction of Sales Effort for Fabricating Part.* A company which had developed a special type of flexible metal tubing to be used by pump manufacturers in making nozzles for gasoline pumps was uncertain: whether to restrict its sales efforts to the pump manufacturers; whether to seek to establish a preference for flexible nozzles among oil companies operating chains of filling stations and among independent filling stations; and whether to undertake to have nozzles then in use on pumps replaced by flexible nozzles. The company decided to make no effort to influence filling stations but to employ salesmen to solicit orders from pump manufacturers and to do missionary work among oil companies.

**MERCHANDISING**—*Restriction of Line to Fabricating Parts.* A company manufacturing metal hose developed a special kind of metal tubing for use in making nozzles for gasoline pumps. The company was equipped to make completed nozzles. It decided, however, to follow its customary practice of restricting its line to metal hose. Hence the new tubing would be sold as a fabricating part to pump manufacturers.

(1928)

Early in 1928 the Downam Manufacturing Company, a manufacturer of metal hose, developed a special type of flexible metal tubing for making nozzles for gasoline pumps such as were used at filling stations. Other makes of flexible hose for this use already were on the market. They were so high in price, however, that sales of them had been small. Nozzles made of Downam flexible metal hose would cost approximately 50% more than the usual type of inflexible nozzle; nozzles cost only a dollar or two each. The company's problem was to market its hose for gasoline pump nozzles.

The largest market for the company's metal hose was the automotive industry. The company also made hose for use in conducting steam and oil and for many other uses. The company made most of its sales directly to users by means of its own salesmen or manufacturers' agents; it made a small propor-

<sup>1</sup> Fictitious name.

tion of its sales to wholesalers. For certain types of hose that it made for special uses, salesmen who were able to advise users in technical matters were required. Ordinarily, however, the salesmen and agents referred to the home office any problems that arose in connection with use of the hose.

The company did little advertising but, because it was an old firm and because there were comparatively few manufacturers of metal hose, it was well known to users.

It would have been possible for the company to manufacture and sell completed nozzles for gasoline pumps; that is, nozzles with all the fittings attached. The company had decided, however, to sell merely the flexible metal tubing for the nozzles. It was the company's policy to restrict its line exclusively to metal hose.

At one time, for example, the company had sold rubber covered metal hose for use in conducting gasoline. The company had been one of the first to develop this type of hose, which was much superior to rubber or fabric hose by reason of its greater durability. The value of the metal tubing in the Downam rubber covered hose had represented about 25% of the total value of the hose. The rest was represented chiefly by the rubber covering. The company had had the hose covered for it by rubber manufacturers and then had sold the completed hose directly to users. Later, when it became evident that a substantial market existed for rubber covered hose, rubber companies also began to sell it. They then were a potential market for metal tubing. However, it was possible that the rubber companies, rather than buy metal tubing from firms selling the finished product in competition with them, would undertake to make their own tubing. Moreover, in view of the proportionally large cost of the rubber in the rubber covered hose, the Downam Manufacturing Company in order to compete with the rubber companies would have to make its own rubber. In view of these considerations the company decided, after it had been selling rubber covered hose for about five years, to discontinue sale of that item and to turn its accounts for the hose over to the rubber companies. In this way the company won the goodwill of the rubber companies and so helped assure itself of a market among them for its metal hose. By making only metal hose, moreover, the company kept its production and marketing problems comparatively simple.

The chief advantage of flexible nozzles for gasoline pumps as compared with the usual type of inflexible nozzles was the time saving made possible through the greater ease with which a flexible nozzle could be inserted in the openings of automobile gasoline tanks. The company experimentally had equipped filling stations in its local area with flexible nozzles and, during a six months' trial period, the nozzles had proved satisfactory.

In marketing its metal hose for use in making nozzles for gasoline pumps, the company might direct sales effort to pump manufacturers, oil companies operating filling stations, or to filling stations themselves. Gasoline pumps were bought from pump manufacturers by independent retail distributors of gasoline and by large oil companies which distributed gasoline either under their own brands or under the brand of a producing petroleum company. Independent retail distributors of gasoline were of three types: owners of automobile accessory or other stores who installed gasoline pumps on the curbs in front of their stores; garages that operated a pump or two as a convenience to their customers; and individually owned filling stations. Oil companies operated chains of filling stations and bought pumping equipment in large quantities, for use in their own filling stations and for lease or, sometimes, for resale to other filling stations. Pump manufacturers sold directly to oil companies and to a lesser extent to independent filling stations.

In addition to the question of the direction it should give its sales efforts, the company considered the further question of whether to undertake to have nozzles then in use on existing pumps replaced with the new flexible nozzles.

Inasmuch as the company had decided to sell only the hose for the nozzles and not the completed nozzles, its potential customers were pump manufacturers, who would make the completed nozzles and equip their pumps with them. The company anticipated that few replacements would be required.

The company decided to make no effort to influence the men actually operating filling stations, either through advertising or missionary work. The sales manager of the company stated that the nozzle was so small a part of the filling station equipment that any effort to create an active preference for a particular type of nozzle on the part of filling station employees would be wasted. The company decided to employ men to solicit orders from pump



manufacturers and also men to visit oil companies to introduce the new type of nozzle to them. Only one or two calls would be made upon each oil company. No advertising would be done of the new hose.

During the first six months that it carried on this sales and missionary work the company was satisfied with the response that it met. The pump companies appeared to be more interested in the new type of nozzle than were the oil companies. The sales manager of the Downam Manufacturing Company stated that competition among pump manufacturers was keen and that each company was seeking new features for its pumps.

The company decided not to seek to have existing nozzles replaced with nozzles of the new type. It had suggested this plan to one oil company, but that company had stated that the possible gains from use of the new nozzles would not be sufficient to justify the scrapping of several thousand dollars worth of equipment and the purchase of new and more expensive equipment.

COMMENTARY: This case affords an example of a type of market in which sales promotion efforts for a fabricating material could not economically be undertaken. The company had decided, for seemingly valid reasons, to sell its hose only for fabricating purposes. The pump manufacturers were the fabricators of nozzles. Hence the company's market for metal hose to be made into nozzles was precisely defined.

The only real problem that arose out of this set of conditions was whether the company should undertake to incite the oil companies and other operators of filling stations to demand flexible nozzles from pump manufacturers. Such a program would not have been economical in this case. The unit price of the nozzles was small; a nozzle was an incidental part of a large piece of equipment, the purchase of which normally was governed by buying motives other than the handiness of the nozzle; and replacement purchases were rare. Under these circumstances sales promotion expenditures sufficient to influence users would have amounted to a prohibitive percentage of the selling price of the fabricating material.

November, 1928

M. T. C.

## YONGE HARDWARE COMPANY<sup>1</sup>

### MANUFACTURER—SCREW DRIVERS

SALES PROMOTION—*Selection of a Method to Improve Distribution.* A company which specialized in the manufacture of screw drivers and which also made certain other mechanics' tools was dissatisfied with the distribution that it had obtained. A large proportion of the potential wholesalers for the company's line purchased a few items but relatively few purchased a representative part of the line. The company was uncertain whether to advertise to retailers or to employ, in certain territories, salesmen to replace the manufacturers' agents it was using.

(1928)

The Yonge Hardware Company manufactured a complete line of screw drivers. It was in fact one of the largest manufacturers of screw drivers in the United States. It also made a variety of other mechanics' tools: box openers, automotive tools, pliers, hack saws, and others. There were about 50 different items in all. By far the largest part of the company's business, however, was in screw drivers and box openers. Of these two, the screw drivers were the more important inasmuch as the market for box openers was a diminishing one, since cardboard and fibre boxes were replacing wooden boxes for many uses.

An important problem of the company in the early part of 1928 was that of obtaining better distribution for its full line of screw drivers among hardware and automobile accessory wholesalers. The larger number of such wholesalers bought at least one item in the line, but few bought the full line or even a representative part of it. Sales of box openers also were not fully satisfactory.

The strongest competition experienced by the company on its screw drivers was from manufacturers who made complete lines of tools and who sold screw drivers as only one item in those lines. These competitors, the sales manager of the company stated, often did a large amount of missionary work, not for

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<sup>1</sup> Fictitious name.

screw drivers as a separate item but for their full lines of tools. Prices of Yonge screw drivers were about medium as compared with prices of competing lines; the price range of Yonge screw drivers was 10 cents to \$1 each. There were 15 to 20 different types; each type was made in a variety of sizes. An executive of the company, in March, 1928, stated that in his opinion the quality of Yonge screw drivers in relation to their prices was better than that of competing products. The Yonge line was trade-marked. Originally the company had made a cheaper line of screw drivers. It gradually had added better grades of screw drivers, however, and had concentrated its sales efforts upon them.

The company's domestic sales were divided: 10% to chain store companies; 10% to manufacturers using the goods as equipment with their products, automobiles, sewing machines, typewriters, and so forth; 10% to manufacturers and others distributing the items as premiums in connection with sale of their products; 55% to hardware and automobile accessory wholesalers; and 15% export. Total sales were approximately \$1,000,000 annually.

The company's sales to manufacturers and chain store companies were handled directly by the executives. To reach the hardware and automobile accessory trade, the company had 5 manufacturers' agents, who together had about 15 salesmen. These agents sold from 4 to 10 noncompetitive lines each. Their salesmen called once every 60 days upon wholesalers in the leading cities and once in 90 days upon wholesalers in secondary cities. The sales manager of the Yonge Hardware Company had route lists which told him the whereabouts of the agents' salesmen; he had no direct means of knowing, however, how much sales emphasis the salesmen placed on the Yonge line. The agents' commission was 10% of sales. The company billed the wholesalers directly.

For the wholesale trade, the company also had two salesmen. One of these men had for his territory Pennsylvania, Ohio, Indiana, Michigan, Maryland, and Delaware. He accounted for 25% of the company's total sales to wholesalers. The other salesman had no definite territory. He was sent wherever the company thought he was needed. Both men were paid flat salaries.



The sales manager of the Yonge Hardware Company estimated that there were in the United States about 680 hardware wholesalers handling tools and about 400 automotive wholesalers who were suitable distributors for Yonge products. He further estimated that the company was selling at least one of its items to 90% of the total number of satisfactory hardware wholesalers and to about 75% of the satisfactory automobile accessory wholesalers. As far as the screw drivers themselves were concerned, the company was selling at least one type to between 45% and 60% of the total number of suitable wholesalers. Less than 18% of the wholesalers, however, bought what the company deemed a complete line of its screw drivers. The distribution on the individual types of screw drivers ranged from 18% for certain types to 30% for other types. Distribution tended to be more complete on the less expensive types, and those were the ones on which the company's profit was least.

The company regarded four types of its screw drivers, representing different price groupings, as constituting a complete wholesale line. These types were standard; if a wholesale firm selling such products did not buy screw drivers of those types from the Yonge Hardware Company it bought them from competing manufacturers.

The wholesalers bought in small quantities and frequently. The company's average sales per wholesale customer were about \$250 a year. The company had no information as to the distribution of its products among retailers.

The company had followed no consistent advertising policy, although it had spent reasonably large sums in advertising.

In March, 1928, the executives of the company recognized that if more complete distribution was to be secured for Yonge screw drivers more sales pressure must be exerted. This sales pressure might take the form of advertising or of work by salesmen. It was proposed that the company should undertake a direct mail advertising campaign to retailers. The company's agent for the city of Chicago, moreover, was going out of business, and it was proposed that, instead of obtaining another agent for that territory, the company should place a salesman there. The agent who had represented the company had employed two salesmen.

The company also was of the opinion that, although it had more complete distribution for its box opening tools than was obtained by any competing manufacturer, sales of those items were decreasing faster even than the diminishing market justified. The company distributed those tools in the same way that it distributed its screw drivers. Users of such tools were manufacturing plants, wholesale firms, retail stores, and any other organizations having wooden boxes or crates to open. The company was considering the advisability of advertising its box openers to users.

COMMENTARY: The Yonge Hardware Company apparently needed to compile additional information on the heart of its problem—the market requirements for its products. It could not intelligently decide on the questions of advertising and other methods of sales stimulation until it was acquainted with the real task to be performed. It needed information on such questions as the following:

How rapidly was the use of wooden boxes falling off?

How did the rates of decline compare in different industries and trades?

How large was the market for screw drivers among artisans, such as carpenters, in comparison with the household market?

What were the requirements of the various segments of the market for screw drivers as regards quality?

Did the company have more items in its line than the market really required?

Could brand preference be established for such an item as screw drivers?

How much of a factor were the chains of variety stores in the distribution of screw drivers?

Information of this sort was indispensable for effective handling of the company's problems.

April, 1928

M. T. C.

## NANCOCK VARNISH COMPANY<sup>1</sup>

### MANUFACTURER—VARNISH

**SALES PROMOTION**—*Curtailment of Missionary Assistance Given Wholesalers' Salesmen.* A company manufacturing varnishes, lacquers, and similar items decided to reduce the time spent by its salesmen in missionary work. It was estimated that between one-third and one-half of wholesalers' total sales of this manufacturer's products were made upon orders taken by the manufacturer's salesmen, who customarily visited retailers in company with the wholesalers' salesmen.

**SALES ORGANIZATION**—*Segregation of Salesforce by Types of Customers.* A company manufacturing varnishes, lacquers, and allied items used industrially and also by consumers and house painters employed separate salesforces, throughout most of its territory, for selling to automobile manufacturers; railroads; aircraft manufacturers; other industrial users; and wholesalers.

(1928)

The market of the Nancock Varnish Company was divided between industrial users buying directly and house painters and consumers buying from retailers and wholesalers. Thirty-five of the company's 80 salesmen sold to this latter class of trade. A large part of their time was spent in what was termed cooperative selling; that is, in soliciting orders for wholesalers' accounts in company with wholesalers' salesmen. It seemed to sales executives of the company that an excessive proportion of the wholesalers' sales of Nancock products were the result of the work of the company's own salesmen. For this and other economic reasons, the company considered curtailing its cooperative sales work to some extent.

Products of the Nancock Varnish Company included varnishes, lacquers, enamels, surfaces, Japans, and similar items. Each of these was made in many varieties. There were 250 types of Nancock varnishes, for example. Industrial customers for the company's products used them either for maintenance purposes or upon products of their manufacture, chiefly for the latter pur-

<sup>1</sup> Fictitious name.



pose. The other type of users of the company's products was house painters and consumers. Until 1913 or 1914 the company had not sought this class of trade. Industrial users commonly bought varnishes and similar products in steel drums or barrels, directly from the manufacturer, whereas house painters and consumers usually bought in relatively small packages from retailers who, in turn, bought from wholesalers. In order to sell to this market, it had been necessary for the company to make a few modifications in its line and to pack its goods in small containers. By 1928, sales to wholesalers constituted from one-third to one-half the company's total sales. The company's net profit on these sales was stated to be less than its net profit on sales to industrial users.

At one time, when its sales were relatively small, the company had assigned each of its salesmen to a definite territory and in that territory the salesman had solicited orders for the full line from all types of customers. It had become evident, however, that some salesmen could sell more satisfactorily to one class of customers than to another. Firms using Nancock products on goods of their manufacture often needed information and advice as to types of finishes to use and methods of application. Nancock salesmen calling on such firms consequently had to be trained in the technical characteristics of the products and familiar with the production problems of the customers. This fact also tended to make advisable a division of the salesforce by types of customers.

In 1928 divisions existed in the company's salesforce according to the following types of customers: automobile manufacturers; railroads; aircraft manufacturers; other industrials, such as piano manufacturers, radio manufacturers, and manufacturers of furniture; and wholesalers. When the company began to sell to wholesalers, it had been deemed unwise to have the same salesmen who were selling in the industrial markets sell to those customers; industrial users primarily were interested in quality and suitability of the goods in use, whereas wholesalers tended to be more interested in prices and profits. This segregation of salesforce was observed everywhere except in territories where the sales volume was too small to justify the employment of more than one salesman. In that event, one salesman sold the full line to all types of customers.

When the company developed a line for sale to wholesalers, or what it termed its architectural line, it decided to grant exclusive sales territories to selected wholesalers. In 1928 the company was represented by about 75 wholesale firms; those firms were paint wholesalers or wholesalers of both paint and hardware. In its arrangements with them the company stipulated that it would sell to no other wholesalers in their territories but that it would, of course, sell directly to industrial users and, in special instances, when orders might otherwise be lost, directly to retailers. Industrial users sometimes placed fill-in orders with wholesalers.

The general sales manager of the company estimated in 1928 that average stocks of Nancock goods in the hands of wholesalers amounted to \$12,000 to \$15,000 per wholesaler, or to little more than a carload. Orders were received from each wholesaler at intervals of from once a day to once every two weeks. For about 3 years the trend had been toward smaller and more frequent orders. Before that time, most of the wholesalers had ordered in carload lots, whereas in 1928 only a few of them did so. The Nancock Varnish Company did not specify minimum quantities to be ordered or minimum stocks to be carried by its wholesale representatives. Those wholesalers, in addition to the Nancock line, usually sold one or two competing lines of varnishes and allied products.

The larger part of the time of the Nancock salesmen for the architectural line was spent in cooperative selling with wholesaler's salesmen; Nancock salesmen seldom visited wholesalers' customers unaccompanied by wholesalers' salesmen. On a cooperative sales expedition, the Nancock salesman, inasmuch as he was more familiar with Nancock products than was the wholesaler's salesman, took the lead in soliciting orders for those products; the wholesaler's salesman also took orders for other lines sold by his firm. Orders taken by the Nancock salesmen were filled by the wholesaler. For each order which he took while selling cooperatively, the Nancock salesman made out an order slip, one copy of which was sent to the wholesaler and another copy of which was sent to the general offices of the Nancock Varnish Company. By means of these slips, the company was able to keep a record of all orders which its own salesmen had taken for wholesalers' accounts. In 1928 the general sales manager stated that his records showed that between one-third and

one-half of wholesalers' total sales of Nancock products were made upon orders taken by Nancock salesmen. He was of the opinion that the proportion should not be more than one-third.

In addition to helping its wholesale distributors by means of its cooperative sales work, the company advertised in trade papers and in national magazines read by paint retailers and users.

All Nancock salesmen, both those selling to industrial users and those selling to wholesalers, were paid on a straight commission basis, except when they first were employed and their commissions were inadequate to support them. Commissions of the salesmen for the architectural line were based on orders taken from wholesalers and not directly on orders taken for wholesalers' accounts. The commissions of those salesmen averaged 6% of sales.

In periods of business prosperity, when sales were large and orders were obtained with relative ease, Nancock salesmen for the architectural line, in addition to their cooperative sales work, were required to devote about one week out of every month to work of a distinctly missionary type. During that week they visited retailers and others who bought competing makes of varnishes and other items, or who merely were potential customers for goods of that type, in order to acquaint them with the merits of Nancock products and, if possible, obtain their business. In times of less active business, and 1928 was such a time for the Nancock Varnish Company, the salesmen were instructed to devote their time to the actual work of taking orders and not to spend much time with firms that were unlikely to place orders until they had been visited many times.

The general sales manager stated that it was customary for manufacturers selling to paint and hardware wholesalers to employ salesmen to assist the wholesalers. Distributors of Nancock products expected this service, he stated, and even complained in some instances because the company did not afford them more sales assistance. Paint manufacturers, manufacturers of brushes, and makers of specialty materials such as wall coatings were examples of other types of companies that employed salesmen to assist distributors. The general manager had no means of knowing definitely just what effect curtailment of the company's cooperative sales work would have.



In one instance, one of the company's salesmen for the architectural line left the company's employ for a sales position with one of the company's wholesale distributors. When this happened, the wholesale firm proposed that the company should discontinue cooperative sales work in its territory and instead allow the firm an extra 10% discount. The company agreed to do this, since its expense for cooperative sales work in that territory amounted to more than 10% of the wholesalers' orders. During the period that this arrangement was in effect, the wholesalers' sales of Nancock products showed a substantial decrease.

The company had another reason for wishing to retain its cooperative sales work than the desire to secure a large volume of sales. This was to maintain contacts with retailers. By maintaining contacts with retailers, the company was able to preserve a certain independence of its wholesalers and, in case a wholesaler discontinued the Nancock line, was in a position to preserve the continuity of its sales through some other wholesaler or directly to the retailers. As a matter of fact, the company rarely changed distributors.

The general sales manager was of the opinion that it would be inadvisable to reduce the number of architectural salesmen in the better territories. He thought, however, that in some of the less profitable territories, where sales, both actual and potential, were small, the time spent by the salesmen in cooperative selling might well be reduced. One such territory was Florida and parts of Georgia and South Carolina. One salesman was covering that territory for the company's entire line, both industrial and architectural. The number of potential industrial users in the territory was very small, so that a large part of this salesman's time was devoted to work with the company's wholesale distributors for the territory and their customers. Sales even to that trade, however, were small and it seemed likely that part of the salesman's time could advantageously be devoted to other territories.

COMMENTARY: For handling its sales to the industrial market, the company had worked out an interesting plan of segregating the salesforce. In the sale of its products for retail distribution, however, the company faced a real problem with regard to its so-called "cooperative selling," a type of missionary sales work. The fact that such cooperative sales work was needed to maintain sales when the distributors were granted exclusive territories suggests that there was a

basic weakness somewhere in the company's marketing plan—as to just where the weakness lay no clue is furnished by the statement of the case. The weakness may have been in the company's advertising, in the merchandise itself, in the type of retail distribution sought, or in the management of the wholesale distributing firms. The decision reached by the company to curtail somewhat the amount of time spent by its salesmen in cooperative selling was a logical step, but the whole problem deserved a more comprehensive diagnosis.

December, 1928

M. T. C.

## COUTREX BRAKE LINING COMPANY<sup>1</sup>

### MANUFACTURER—BRAKE LININGS

**SALES PROMOTION—***Preferential Market Established by Use of Patented Service Machine.* A company manufacturing brake linings and allied products sold them directly to automobile manufacturers and through automobile accessory wholesalers to the replacement market. In order to increase the demand for its brake linings in the replacement market, the company decided to lease a patented servicing machine to individuals agreeing to operate stations specializing in brake service and using only the company's linings. At first franchises were granted on an exclusive territorial basis but later this was changed to a selected basis. A smaller and less expensive type of brake lining machine was developed and sold outright to garages and unauthorized service stations.

**SALES PROMOTION—***Special Discounts Given Customers Placing Initial Orders for Specified Quantities.* A manufacturer of brake linings, as a means of sales promotion, gave extra discounts on all purchases made by any garage or service station which placed an initial annual order for 300 feet of lining or for a quantity sufficient to bring its stock on hand to that figure.

(1922-1928)

The Coutrex Brake Lining Company was one of the oldest manufacturers of brake linings in the United States. Its linings were of high quality; prices were comparable to those for competing linings of good quality. In addition to brake linings, the company made clutch facings and several allied items. The company also sold a variety of allied products not of its own manufacture. Among these products were rivets, tools for relining brakes, brakes, and wheel pullers. The brake linings and the clutch facings were the company's most important items. Most of the other products, although sold at prices which allowed the company a profit, were handled primarily for the purpose of promoting sales of the linings and facings. The company's annual sales amounted to between \$4,000,000 and \$5,000,000.

The chief market which the company had developed for its brake linings was for use in automobiles and trucks, both as

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<sup>1</sup> Fictitious name.



original equipment and for replacements. Certain types of Coutrex linings, however, were suited for use in such equipment as mine hoists, dumping machines, cranes, centrifugal extractors, and other industrial machinery. The clutch facings, in addition to being used in automobiles, also were used on industrial equipment and in such products as washing machines, elevators, and shop trucks.

The Coutrex Brake Lining Company had advertised its brake linings to some extent in trade papers and had advertised them widely in general magazines read by consumers. The company was a pioneer in the manufacture of brake linings and had been one of the first to undertake to focus the attention of automobile users upon the importance of good brakes.

At one time the company had made use of manufacturers' agents. Sale by manufacturers' agents had been discontinued, however, chiefly because the agents tended to exercise too large a measure of control over Coutrex products and to make customers for themselves rather than for the company. To avoid these difficulties, the company had established its own salesforce.

The company sold directly to automobile manufacturers and other manufacturers using its linings and facings for original equipment. To reach the replacements market, it sold to automobile accessory wholesalers and in a few instances to hardware wholesalers with automotive departments and to replacement parts wholesalers specializing in a few lines. A few automobile accessory wholesalers in the mining territories also handled mine supplies. In 1923 the company was selling to approximately 300 wholesalers, with a combined salesforce of about 3,000 men. The distributors did not have exclusive territories; the company selected them, however, so as to avoid serious overlapping in their territories.

Most of the wholesalers handling the company's brake linings did not sell competing linings. The wholesalers, however, sold a wide variety of items and could not be depended upon to create demand for Coutrex brake linings. This meant that it was necessary for the company to create a demand for its products among car users and garages and service stations doing brake relining work. The company's method of encouraging use of its brake linings by users was to place advertisements in general magazines read by consumers and to provide garages and service stations

with advertising cards and other materials for distribution to users. The company had two methods of promoting sales to garages and service stations. One of these methods was to grant franchises to firms or individuals who would agree to specialize in brake service and to use Coutrex linings exclusively. The other method was to enter into agreements with garages and service stations whereby they purchased specified minimum quantities of Coutrex brake linings.

The company had begun to grant franchises for the operation of Coutrex brake service stations in 1922. At that time the company was offered exclusive distribution rights to an improved and patented machine for use in lining brakes. This machine performed the three operations of locating, drilling, and counter-sinking at one time and hence materially reduced the time required for relining. The machine also had other advantages which, in the company's opinion, made it superior to similar machines.

It had been proposed that the company should lease relining machines to selected firms or individuals who would agree to operate service stations specializing in work on automobile and motor truck brakes. These stations would be similar in principle to the battery service stations which had been growing in numbers. The brake service stations leasing the relining machines would be required to use only Coutrex linings in them. All the income from the leased machines would go to the manufacturer of the machines; the Coutrex Brake Lining Company would depend upon sale of its linings for its profit. The manufacturer of the machines also would service them. The company would give each authorized service station a sign to display and would agree to assist the stations with advertising and dealer helps and with technical advice, and to cooperate with them closely in every way. The authorized service stations also would be allowed a larger discount than was allowed other service stations and garages. At that time, no competing manufacturer was following such a plan.

The company had decided to adopt this plan. It asked its wholesale distributors to assist in finding suitable persons to whom to grant franchises. The question soon had arisen as to whether the service stations would be given exclusive territories; persons to whom Coutrex salesmen and distributors presented the company's plan usually asked for exclusive territories. The company, therefore, had decided to grant exclusive territories to such stations

as it deemed satisfactory representatives. The service stations were expected to place initial orders for 1,500 feet of brake lining. They would buy from the wholesalers and not directly from the company.

After about a year the company had come to the conclusion that the granting of exclusive territories to service stations was unnecessarily restricting its sales. It, therefore, discontinued the exclusive franchises. It also found it expedient to reduce the purchase requirements from 1,500 feet to 500 feet. The company decided that the type of man operating a station was more important than the size of the station. To be granted a franchise, a man must be a competent mechanic or must employ men who were; must have adequate capital, approximately \$5,000; and must not have a station too near another Coutrex station. Although the company did not grant exclusive territories to the service stations, it undertook not to overcrowd any territory. The authorized Coutrex stations served passenger car owners; firms operating fleets of trucks; and garages which did general repair work but which were not equipped to give brake service.

In 1928, about six years after the first Coutrex service station was authorized, there were about 3,000 such stations, without exclusive territories, in the United States. The company estimated that each station bought an average of 2,000 to 3,000 feet of Coutrex brake lining annually; prices per foot ranged from 45 cents to \$7, the amount depending on the type of lining and its thickness and width. The company's wholesalers could depend upon securing this much business each year with little sales effort, and this fact served to help the company retain its distributors.

In 1928 the company had 50 salesmen. Two of these men sold exclusively to manufacturers, and another of the men spent the larger part of his time in work with manufacturers. A large part of the company's sales to manufacturers, especially those other than automobile manufacturers, were made on orders received by mail. The other 48 salesmen were free to visit manufacturers in their territories, but they devoted most of their time to visiting wholesalers and to doing missionary work on the wholesalers' behalf. Coutrex salesmen often accompanied the wholesalers' salesmen on their calls. The salesmen were paid flat salaries.



The wholesalers were expected to sell Coutrex products to as many garages and other places relining brakes as possible. The special brake lining machine could be leased only to authorized Coutrex brake stations, but the company had developed a smaller and less expensive type of brake lining machine which it sold outright to garages and other users.

As a method of sales promotion among garages and unauthorized service stations, the company, with the assistance of its distributors, had entered into agreements with a large number of garages and service stations whereby they each placed initial annual orders for 300 feet of Coutrex brake lining or for a quantity sufficient to bring their stocks to 300 feet each. On these initial orders and on all subsequent orders which they placed during the year, the garages and service stations entering into this agreement were given a larger discount than was allowed other garages and service stations, except the authorized Coutrex stations. The discount given those stations was even larger than that given the stations entering into the initial order agreement.

In addition to the better discount allowed the garages entering into the agreement, the company supplied them with various sales aids, including advertising materials for distribution to car owners and also manuals of instructions concerning use of brake linings and methods of relining.

The company was of the opinion that its granting of franchises to selected stations not only improved brake service to car owners but also increased its number of outlets, familiarized car owners with the Coutrex name and with the importance of good brakes, gave the company better control of its distribution, and improved its relations with its wholesale distributors. The 300-feet agreements also had many of these same advantages.

**COMMENTARY:** This case illustrates the utilization of a patented service machine for establishing a preferential market. The company did not restrict the sale of its brake linings to stations leasing the machine, but it did induce those stations to purchase only Coutrex lining material. The company sought to encourage these preferential arrangements not only by avoiding the granting of franchises to closely competing stations but also by placing emphasis on the mechanical competency of the staff of each station in selecting those to which franchises were to be granted. This program undoubtedly gave a greater stimulus to the aggregate sale of Coutrex linings than would

have been attained by a promiscuous leasing of the machines. The plan adopted furnished an incentive to the holders of the franchises to promote sales of Coutrex linings and helped to enhance the reputation of the material.

The employment of missionary salesmen was advantageous in this case, since they aided in the selection of properly qualified stations to which franchises were to be granted and aided in supervising relations with those stations.

April, 1928

M. T. C.

## FABECK PRODUCTION & SUPPLY COMPANY<sup>1</sup>

### MANUFACTURER AND DISTRIBUTOR—ELECTROPLATING AND POLISHING EQUIPMENT

BRANDS AND TRADE-MARKS—*Use of Family Trade-mark.* A manufacturer and distributor selling a complete line of electroplating and polishing materials had for many years applied individual brand names to its products. Since many of the items did not possess distinctive characteristics and all were of similar quality and closely associated in use, the company decided to discontinue or at least cease to emphasize the brand names and instead simply to sell the products under the company's own name and pictorial trade-mark.

SALES CONTROL—*Minimum Order Requirements.* A manufacturer and distributor of materials for electroplating and polishing was receiving a large number of small orders daily which a cost analysis revealed as unprofitable. The company decided to increase price differentials on less than barrel lots and to set \$5 as the value of the minimum order to accept.

(1927-1928)

In 1927 and 1928, the Fabeck Production & Supply Company was called upon to decide two questions. One of these was whether the company should seek to establish brand preference for its products through the use of individual trade names. The other question, which had no relation to the first one, was what attitude the company should take toward the filling of small orders.

The Fabeck Production & Supply Company sold a complete line, comprising from 200 to 250 items, of equipment and supplies for electroplating, buffing, and polishing. The company manufactured many of the items that it sold. Others, chiefly items of supply, it purchased for resale. Among the products were: anodes, buffs, brushes, various chemicals, cleaners, compositions, generator and motor generator sets, rheostats, ammeters, voltmeters, plating barrels, burnishing barrels, tumbling barrels, jars, tanks, lathes, glue pots, conveyors, polishing machines, buffing machines, polishing wheels, salts of various kinds, and miscellaneous items such as rubber aprons and gloves, wire drip-

<sup>1</sup> Fictitious name.



ping baskets, pumice, acid pumps, and emery. All firms employed in plating or polishing metals were potential customers of the company. Single installations ranged in price from \$1,000 to \$150,000, and single items ranged in price from a few cents to several thousand dollars. The Fabeck Production & Supply Company was the largest in its field. Its total sales of supplies were larger than its sales of equipment, although not all users of Fabeck equipment bought their supplies from the company.

Except in areas where potential sales were small, the company sold directly to users. It had tried to sell through supply firms, but, except in sparsely settled territories, this plan had proved unsatisfactory. Fabeck products were technical and it was important that salesmen be able to talk intelligently to the users and to make helpful recommendations to them as to types of supplies to use and methods of plating and polishing to follow. This had not been done adequately by supply firms.

For many years the company had applied individual brand names to its products and had advertised them under those names. The names also were stamped on the products, or, if that was not possible, on the containers in which they were sold. In some instances the same names were used for several items. For instance, one name might apply to a certain type of brush, to a particular kind of polishing wheel, to a special composition, and perhaps also to a generator and a burnishing barrel. The names used were such as Emperor, Success, Victor, Unmatchable, and Best. Names were given even to the chemicals, such as aluminum sulphate, arsenic, and soda ash, that the company sold. In most instances the company's name also appeared on labels and in advertising of the products, but the special names were featured.

The company's products were of high grade, and their prices tended to be slightly above the general competitive level. The compositions, chemicals, and other items of supply and equipment made by the company all were judged to have special features making them superior to competing products and providing a basis for brand discrimination. In an advertisement of one of its polishing agents, for example, the company was able to point out special features distinguishing the product:

On the majority of brass novelties, which are highly buffed before plating, the use of Capitol Nickel Brightener in the solution will eliminate entirely the necessity for color buffing after plating.

On heavily plated work which may require a light color buffing, the use of Capitol Nickel Brightener in the solution eliminates the necessity of cutting to a color. Due to this fact, the recesses, being bright, color easily. This decreases to a minimum the cutting through of nickel plate on high parts of articles being plated.

Unlike other brightening agents, Capitol Nickel Brightener can be added greatly in excess of what is recommended and in no case does it produce a dark, streaky deposit; but under no conditions should it be added to a solution containing any other brightener.

As far as the brushes, buffs, and polishing wheels were concerned, moreover, individual names served to distinguish various types. Some types were meant for one use while other types, similar in appearance, were intended for use under different conditions or on different metals. It was important for the best results that the supplies particularly suited to each job should be used. For example, in one of its advertisements the company stated:

Only last week, a Chicago manufacturer, assisted by a Fabeck Survey, found a combination that gave him better work with 3 ounces of buff and 24 ounces of composition than he obtained before with  $8\frac{1}{2}$  ounces of buff and 34 ounces of composition.

The buffs you are using may be better than needed for your work—or they may not be good enough. In either case you lose—in cost of buffs or cost of composition. The same is true with compositions. There is no golden rule—it's simply a matter of getting the right combination.

With a few exceptions, the trade names adopted by the company had not come into general use among purchasers. Customers in ordering supplies or items of equipment did not specify them by the names given them by the company. In the case of chemicals, for example, customers almost always used merely the ordinary commercial names. In other instances, customers merely stated the purposes for which they desired supplies or equipment, and perhaps stipulated prices. For one item, however, the company had been outstandingly successful in establishing an individual brand name. This was in the case of a lime finish used for buffing nickel. The name that the company applied to this item was "Best White Finish." This was the first lime finish to be placed on the market, and the company had sold and advertised it for about 35 years. It had

proved remarkably satisfactory and, in 1929, was said to be the largest selling lime finish in the world. Users when ordering this finish almost invariably specified it by name. The company also sold a rouge finish to which the name "Best" had been applied for more than 40 years. The name in this connection also was well established, although not so well as in the case of the lime finish.

In addition to its Best White Finish, the company sold six other lime compositions, some of which were made to fit particular conditions and some of which had been introduced to meet competition from lower priced finishes. The lime compositions made to meet special conditions were of equal high quality with the Best finish and were sold at the same prices. The compositions added to the company's line to meet competitive conditions were of a somewhat lower quality and were sold for 2 cents a pound less. All the compositions were sold under individual brand names. Those brand names were infrequently used by customers, however. Sales of the cheaper finishes were far smaller than sales of the Best White Finish and showed no tendency to increase at the expense of that finish. The lower grades were purchased chiefly by small firms buying from hand to mouth.

The company decided that, with the exception of the name Best, which had become well established, trade names should be discontinued or at least not emphasized. Emphasis was to be placed instead on the company name and standard trade-mark, a simple geometric figure with the name and address of the company printed around the edge. These would appear prominently on all advertising and on packages. Individual trade names for chemicals were to be discontinued entirely in favor of the ordinary commercial names, and in advertising its chemicals the company would give the chemical analyses rather than trade names. On items of equipment, moreover, only the company name was to be used. No advantage was thought to accrue from efforts to establish individual names for such items. In the case of polishing wheels and certain other products, individual names would be retained, but subordinated to the firm name, as a means of distinguishing between various types. The company also decided to increase its direct mail and its trade paper advertising, which already were extensive, and to stress performance facts rather than quality, as had been the tendency previously. Executives of the company were convinced that the company's experience with



individual trade names showed that on the whole any effort to establish those names so firmly that customers would use them in ordering would be largely wasted.

The other issue raised by the company had to do with small orders. Every day the company received an average of 15 to 20 orders amounting to less than \$5 each. The company figured that the actual cost of filling an order was not less than \$1.50. Although the company's prices for small quantities were somewhat higher than for larger quantities, the differential was not sufficient to prevent actual losses on the small orders. For the most part the customers who placed small orders operated job plating shops and purchased supplies for each job as it was received. Large customers also placed small fill-in orders occasionally.

The company had tried the policy of referring small orders to supply firms to be filled. This had proved unsatisfactory, however, because the supply firms often failed to have in stock the materials ordered or to give the orders prompt attention. The company would have liked to establish distributing branches where an over-the-counter business could be carried on. Financial considerations made this step impracticable, however.

The company decided to increase the price differentials for purchases in less than barrel lots and to seek to have competitors make similar increases in their base prices. The price increases made would reduce the losses on small orders, but would not eliminate them. The company decided, therefore, to fill no orders amounting to less than \$5 except those from customers ordinarily buying in larger quantities. A form letter was prepared to be sent to other customers placing small orders. This letter, a copy of which is given below, would be accompanied by a leaflet listing the materials and equipment sold by the company. In the letter it was suggested that the customer add to his order certain of the other items sold by the company and required for his work.

Gentlemen:

Your order

calls for

A careful analysis of our costs proves that at our present selling prices we cannot profitably handle orders for less than \$5.

Rather than increase our sales prices, affecting everyone, we decided to set \$5 as our minimum order; and upon reflection we believe you will agree that this policy is reasonable. It does not add to the large order a burden caused by smaller purchases, and

at the same time gives a small purchase a full measure of value and enables us to handle it without loss.

Perhaps you can use more of the above material, or perhaps you can select other merchandise from the items listed in the attached circular which will bring your order up to the \$5 minimum.

We sincerely trust that you will be able to increase your order as suggested.

It will not be necessary for you to write us a letter. Simply note your wishes in the space provided below and return. Thank you.

Yours sincerely,

FABECK PRODUCTION & SUPPLY COMPANY

by

Secretary

YOU MAY INCREASE OUR ORDER TO

YOU MAY ADD TO OUR ORDER:

During the first few months that this letter was used, it appeared to be successful in eliminating the filling of orders amounting to less than \$5, without offending the persons placing the orders. In a few instances, customers to whom the letter was sent wrote angry replies. The usual result, however, was to lead the customers to add to their orders so that they amounted to \$5 or more.

COMMENTARY: The products of this company in many instances did not possess dominating characteristics even though they were dependable in quality. Consequently it was difficult, if not impossible, to make each product stand by itself with an entirely independent brand name. The general qualities of the line, however, and the close association of the various products rendered the situation one in which a blanket trade-mark could be used advantageously, provided the trade-mark was phrasable. The blanket trade-mark could be supplemented by brand names on those products which had some degree of individuality, but even then the chief emphasis would be on the blanket trade-mark. This conclusion accords in principle with the company's decision. The case is closely analogous to that of the Sheridan Chemicals Company.<sup>2</sup>

As regards the second problem in this case, the company clearly was warranted in seeking to curtail the number of small orders which it was receiving. It could not afford to peddle out its product in what amounted to retail lots unless it received retail prices for them.

March, 1929

M. T. C.

<sup>2</sup> 6 H.B.R. 349.

## DRIVER-HARRIS COMPANY

### MANUFACTURER—WIRE

**BRANDS AND TRADE-MARKS—***Use of Family Trade-mark.* A company manufacturing electrical resistance wires and allied products purchased a competing company which among other items had been selling a high-quality wire under a distinctive brand name. In planning to continue the manufacture of this wire in place of a corresponding but less satisfactory product of its own, the purchasing company decided to replace the brand name of the acquired product by the well-established trade-mark it had been using on the less satisfactory wire. The company also was using that trade-mark on another type of wire which was of lower quality but which had proved highly satisfactory for the purposes for which it was intended.

(1925)

In 1925 the Driver-Harris Company, of Harrison, New Jersey, purchased a smaller competing company manufacturing lines practically identical with its own. This competitor had been selling electrical resistance wires, comparable to those made by the Driver-Harris Company, under advertised trade names. It was necessary for the Driver-Harris Company to decide whether to continue the use of those names. In the case of all but one of the names the company readily decided to discontinue them, as the products to which they applied had no superiorities over Driver-Harris products and the names were less well known than those used by the Driver-Harris Company. "Karma," the name that it was thought might well be retained, however, was used for an alloy wire that had proved much superior to the corresponding wire manufactured by the Driver-Harris Company.

The Driver-Harris Company, with annual sales of several million dollars, manufactured a variety of products. Among them were wires for electrical resistance; wires for mechanical, chemical, and other uses; alloys for special purposes in rods, strips, or sheets; cord for electrical heating devices; castings for use where high resistance to heat was required; dies for drawing wire; and pure nickel. Nickel was the basic substance in Driver-Harris



products. The most important of the company's lines was the electrical resistance wires. Those wires were sold chiefly to manufacturers of electric heating devices, such as toasters, curling irons, electric stoves, and, in the industrial field, electric furnaces. An officer of the company estimated that there were 3,000 to 4,000 purchasers of electrical resistance wires, but that 35 of them accounted for 80% of the total purchases of such wires. Except on the Pacific Coast, the company sold directly to users.

The Driver-Harris Company was a large advertiser, both in trade papers and directly by mail. In its advertising it stressed the fact that by buying from the Driver-Harris Company users could be confident of quality and uniformity of product.

For more than 15 years prior to 1925 the Driver-Harris Company had been selling an electrical resistance alloy, in the form of wire, ribbon, strip, rods, sheets, and castings, under the registered trade-mark "Nichrome." This alloy, which was made of nickel and chromium, had proved highly satisfactory in use. In fact, an officer of the company stated, the word "Nichrome" was as well known in its field as the word "Kodak" was in the more general market in which it was used. There was a strong tendency for the word "Nichrome," like the word "Kodak," to be adopted into the language as a generic term applicable to nickel and chromium alloys no matter by whom they were made. It had been necessary for the Driver-Harris Company to decide whether it wished to encourage this tendency. The company had decided that it did not. It had, through the excellence of its product and its sales and advertising activities, created strong brand preference for Nichrome. To permit this name to be used generically, to refer to other nickel and chromium alloys as well as those made by the Driver-Harris Company, would, in the opinion of executives of the company, destroy much of the advantage that should accrue to the company from that name. To preserve the significance of the word "Nichrome" as applying to a product of the Driver-Harris Company, therefore, the company exercised great care never to permit the name to be written as an ordinary word. Wherever it appeared it was printed in a distinctive manner, surrounded by quotation marks, or accompanied by the words, "Registered Trade-Mark."

There were companies, an executive of the Driver-Harris Company pointed out, that apparently wished to have the names

they had adopted for their products come into general use. He cited the example of one of the company's competitors who had adopted the trade-mark "Chromel" for an alloy comparable to Nichrome. That competitor, as far as could be judged by appearances, was making no effort to keep that word from coming into general use as a term meaning a nickel and chromium alloy.

With the exception of the product of this particular competitor, which was sold at the same prices as Nichrome, alloys comparable to Nichrome were sold, it was stated, for 10% less than that alloy. The reliability of the seller was of real importance to users of these alloys. It was possible to test the metal before buying, but not the part that was to be used, for the tests that were applied completely destroyed the part tested. This meant that the user had to rely for uniformity upon the reputation of the product. The value of the resistance wire in an electrical heating device was relatively small, but the performance of the wire itself under operating conditions was of great importance. It was estimated that the cost of the wire in an electric toaster or an electric flatiron was 6 cents to 10 cents. In an electric industrial furnace selling for \$4,000, the wire might cost \$500 to \$600. Compared with non-alloy wires, Nichrome was high in price. Comparable prices for one size, for example, were 12 cents a pound for steel wire, 26 cents for bronze, 91 cents for nickel, and \$2.52 for Nichrome.

In addition to Nichrome proper, the Driver-Harris Company had developed three other grades of nickel-chromium alloy. These it called Nichrome II, Nichrome III, and Nichrome IV. The company also had several other types of alloys that it sold under distinctive trade names. "Comet," for example, was the name applied to a nickel-chromium-iron alloy; and "Advance" was the name given nickel-copper alloy. These names were registered and protected by the company, but their significance was not widely and generally known by users, as was that of Nichrome, nor was their sales volume comparable to that of Nichrome. Nichrome II and Nichrome III had been introduced a few years after Nichrome was placed on the market. They were the forerunners of Nichrome IV, being superior in quality to Nichrome; their prices were respectively 25% and 35% higher than Nichrome prices for corresponding sizes. Their sales record had been satisfactory to the company, although the combined sales

volume for the two was only about 25% as large as Nichrome sales. With the growing use of electricity for heating purposes, and its extension to more difficult applications, the company judged that there was need for a still better material. To meet this need Nichrome IV was developed.

Nichrome IV was based on Nichrome I and was meant for the same type of uses. It was intended, however, to be of a better grade and to be able to resist much higher temperatures. Nichrome IV, in other words, was intended for use in heavy-duty heating apparatus operating at high temperatures for long periods; whereas Nichrome I was for use in a lighter type of heating apparatus. Nichrome IV was about 50% higher in price than Nichrome I.

The Driver-Harris Company had been selling Nichrome IV for four or five years when it purchased the competitive company. Nichrome IV, however, had not been successful, chiefly because it was lacking in uniformity. Initially it had sold readily because of the proved excellence of Nichrome. Many companies after using it for a short time, however, ceased to use it. Sales were failing to show any increase.

The competitor which the Driver-Harris Company purchased in 1925 had been marketing for several years a nickel-chromium alloy directly comparable to Nichrome IV. This alloy was sold under the trade-mark "Karma," signifying the highest or best. Other alloys made by this competitor were of good quality, but for the most part they were inferior to Driver-Harris products. Karma, on the other hand, was far superior to Nichrome IV, and its sales had been increasing constantly. Total sales of the manufacturer of Karma amounted roughly to half a million dollars. Of that amount, about 30% represented sales of Karma. Sales of Karma were larger than sales of Nichrome IV.

After the Driver-Harris Company purchased the competing firm, it was in a position to continue the manufacture of Karma and to discontinue the manufacture of Nichrome IV. The question raised was whether the company should call the product Karma or Nichrome IV. Karma had been advertised in trade papers and directly to users. It was an excellent product and had proved thoroughly satisfactory in use. In its excellence, it was comparable to Nichrome I. The name Karma was thought to have a pleasing sound and to be capable of lending itself to effective advertising. Nichrome, on the other hand, was the outstanding



name for electrical resistance alloys. It was far better known than Karma. Nichrome IV, however, had proved unsatisfactory.

The company decided, in spite of the poor reputation that Nichrome IV had established for itself, to continue use of that name in preference to the name Karma. This decision was based on the belief that in the long run more was to be gained by concentrating on the already well-established word Nichrome than by taking advantage of the temporary prestige of the word Karma.

In 1925, when the company purchased the competing firm, sales of Nichrome and Nichrome IV were in the ratio 70 to 30. By 1929 this ratio had changed to 50 to 50. In the same period sales of Nichrome II and Nichrome III declined and their manufacture practically was discontinued. The general sales manager of the company said in this connection:

The trade has developed a consciousness that Nichrome is satisfactory for the greater field of usefulness, and if Nichrome is not good enough the next step is to go to the best obtainable, which is Nichrome IV. Nichrome II and III were discontinued because there was no particular application for a material between the standard Nichrome and the best that the industry afforded.

COMMENTARY: The experience of the Driver-Harris Company with sales of Nichrome I and Nichrome IV prior to the purchase of the competing company suggested that the difficulties in stimulating sales of Nichrome IV were partly the result of brand confusion, resulting from the similarity in designation of the two grades. The subsequent experience, however, after the superior product Karma was sold as Nichrome IV, proved that lack of brand discrimination had not been responsible for the unsatisfactory sales showing of the old Nichrome IV. In this instance the trade-mark was valuable as an index to quality, and the fact that the sales of the lower grade of the product sold under the same trade name and differentiated from the better grade only by a numeral did not increase at the expense of the better grade is worthy of note. Presumably the circumstance that these materials were bought from purely rational buying motives led to discriminating selection by customers according to their respective needs. The customers generally were of a type likely to exercise such discrimination.

This case points to an important limitation on the doctrine of trading down as applied to industrial goods and opens a fertile field for further inquiry on trade-mark policy.

February, 1929

M. T. C.

## QUEESNAY MANUFACTURING COMPANY<sup>1</sup>

MANUFACTURER—FIRE PROTECTION EQUIPMENT AND TIRE CHAINS

BRANDS AND TRADE-MARKS—*Extension of a Trade-mark to a New Product.*

A company manufacturing a widely advertised and reliable line of fire protection equipment acquired a company that made high-grade chains for automobile tires. The former company decided to discontinue use of the trade name that had been applied to the chains and instead to sell them under its own name, which also was employed for the fire protection equipment.

(1927)

The Queesnay Manufacturing Company was one of the largest makers of fire protection equipment in the United States. For more than 10 years the company had advertised its fire extinguishers extensively to the general public as well as to distributors and industrial users. Executives of the company were of the opinion that the Queesnay name was identified in the minds of consumers with fire protection equipment of a high grade.

In 1926, the Queesnay Manufacturing Company acquired another company which, for about five years, had been manufacturing and marketing high-grade chains for automobile tires. This manufacturer had sold the chains under a trade name which was expressive of a mechanical feature of the chains that constituted one of their chief selling points. For a year, the Queesnay Manufacturing Company continued to sell the chains under that trade name. In 1927 it was suggested, however, that the company should discontinue use of that name and apply to the chains its own name, under which its other products were sold.

The Queesnay Manufacturing Company had added tire chains to its line in order to make use of excess production facilities and to increase its autumn and early winter sales. At that time sales of fire extinguishers tended to decrease because distributors curtailed their purchases in order to have as small inventories as possible at the first of the year. In the autumn and early winter, sales

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<sup>1</sup> Fictitious name.

of tire chains, on the other hand, tended to be large, especially if weather conditions were favorable.

Another argument advanced in favor of the addition of chains to the company's line was the fact that the company already had established relations with wholesalers of automotive equipment and accessories. Such firms were one of the distribution channels for Queesnay fire extinguishers. The company sold its fire equipment to selected hardware wholesalers, mill supply firms, marine supply firms, wholesalers of electrical supplies, firms specializing in the sale of fire equipment, and automobile accessory wholesalers. The largest users of fire protection equipment were industrial firms, public utilities, railroads, public buildings, and offices. Individual consumers used fire extinguishers to some extent for the protection of their homes and automobiles; such use was confined for the most part to owners of large estates and high priced automobiles.

The addition of chains to the company's line, moreover, was stated to have involved only slight additional marketing expenses. The salesmen who sold the fire equipment were given the chains to sell also, and they already were soliciting orders from automobile accessory wholesalers.

It had been suggested, when the question of marketing chains was being considered, that the salesmen might spend so much time on the chains that sales of fire extinguishers would be neglected. After two years' trial, however, the sales manager stated that, "while it is true that the chain line does take considerable of the salesmen's time, this has not lessened our volume of fire equipment business."

The proposal that the company should sell its tire chains under the Queesnay name was based on the belief that the prestige which was thought to attach to that name would assist in the sale of the chains. The company not only had sought to manufacture fire equipment of high quality, but also had endeavored, through the work of its salesmen, educational literature, and instructive advertising, to have appropriate fire protection equipment used for each type of hazard, in this way protecting the reputation of its products. It was anticipated that if the tire chains were associated with the fire extinguishers under a common name, the chains would share in the high reputation of the extinguishers.



The firm that previously had marketed the tire chains had obtained a limited distribution for them through automobile accessory wholesalers. It had not advertised the chains on a large scale to users. Nor had the Queesnay Manufacturing Company, after it began to market the chains, advertised them extensively to the general public. Distributors knew that the chains were being made by the Queesnay Manufacturing Company, and executives of the company were of the opinion that this knowledge had enabled the company to secure distributors in a highly competitive field more easily than could have been done by a new and unknown company. The company expected to increase the amount of advertising done for its chains.

The trade name that was being used on the chains was descriptive of an attractive mechanical feature of the chains. Not all chain users desired chains of that type, however, and the company sometimes received orders for chains not embodying the special feature. Inasmuch as such chains were cheaper to manufacture than were the chains with the special feature, the company was glad to fill orders for them, but it was a misnomer to sell them under the trade name applied to the other chains. The company also from time to time received orders for "Queesnay" chains with no mention of the actual trade name of the chains.

The company decided to discontinue the trade name under which it had been selling its chains, and to sell them simply as Queesnay chains. After a year's trial of this plan, the company was of the opinion that use of the Queesnay name had been a factor in securing additional distributors and increasing sales.

COMMENTARY: This case presents a border line problem on the use of group trade-marks. The markets for tire chains and for fire extinguishers overlapped only to a slight extent and the uses for the two products were dissimilar. Hence, the use of the same mark on tire chains and fire extinguishers could be expected to carry over small influence from one market to the other. Nevertheless, since both products were sold for the prevention of disaster, no conflicting association of ideas was involved in the application of the same mark to both products. Inasmuch as for one section of the combined market the two products were sold by the same wholesalers and retailers, furthermore, some lessening of resistance in securing distribution for the tire chains might be expected. Aside from such loss as might

result from scrapping an established trade-mark, therefore, there was no strong reason for not applying the same trade-mark to both products, and there was enough to be gained to justify the company's decision. The company could not rely upon the reputation of its fire extinguishers, however to go far in promoting the sales of tire chains.

December, 1928

M. T. C.

## AKBANE MANUFACTURING COMPANY<sup>1</sup>

### MANUFACTURER—ELECTRIC FANS

**SALES TERMS—***Adoption of Consignment Selling for Commodity with Seasonal Demand.* A company manufacturing electrical goods sold its electric fans through wholesalers. Competitors began to consign stocks of fans to wholesalers and the company, at the request of its distributors, likewise adopted this practice. The consignment plan was expected to assist the company in obtaining additional wholesale representatives and in controlling stocks in distributors' hands. Additional sales outlets were judged necessary because of changes in the electrical wholesaling trade which had resulted in an increased number of wholesalers and a reduction in the average size of territory covered and in the size of orders placed. Control of stocks in distributors' hands was important in view of the seasonal nature of the demand for fans.

(1927)

Products of the Akbane Manufacturing Company were of two kinds: technical electrical goods for sale to manufacturers of machinery, and electric fans for office and household use. In 1927 executives of the fan division considered the wisdom of consigning fans to wholesalers rather than selling the fans outright as then was being done.

The two divisions of the company's business were operated independently of each other. The goods sold to machinery manufacturers required sales engineering consideration and, in many instances, were made to order. Those products had a unit value of several hundred or more dollars. The fans, on the other hand, were standard and had a small unit value. Instead of being sold to users, they were sold to distributors.

Distributors of Akbane fans were wholesalers of electrical goods. The company did not give them exclusive sales territories but maintained a selected distribution. In 1927 the company was selling to approximately 100 wholesalers. It had a small sales-force for soliciting orders from wholesalers. At irregular intervals Akbane salesmen called with wholesalers' salesmen upon their

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<sup>1</sup> Fictitious name.



customers. Usually this was done at times when sales were deemed unsatisfactory.

The manager of the fan division of the company stated that in recent years certain changes had taken place in the electrical wholesale trade that affected manufacturers selling their goods through that channel. Whereas, at one time, electrical wholesalers had sold in very large territories, by 1927 a majority of electrical wholesalers, he pointed out, seldom covered a radius of more than 300 miles each. Furthermore, the wholesalers were buying in smaller quantities. At one time the company had required each of its wholesale representatives to place an order at the opening of the fan season for a carload of fans, amounting to from \$7,000 to \$8,000. Later, the required stock order was reduced to 500 fans, and by 1927 there practically was no specification on the company's part as to size of wholesalers' orders. The large, established wholesale firms, moreover, tended to concentrate on items of relatively high unit value, and small firms had arisen which devoted themselves to the rapidly moving items of low unit value. These smaller firms depended for their profits upon a rapid rate of stock-turn and low operating costs; they did not, for instance, extend liberal credit terms to electrical contractors as had been customary with the older firms. In addition to these changes, several large manufacturers of electrical goods had acquired wholesale outlets of their own. The Akbane Manufacturing Company, although a large firm, did not own wholesale outlets.

As the number of electrical wholesalers increased and their sales territories decreased, it became important for the Akbane Manufacturing Company to obtain additional wholesale representatives. Each wholesale firm usually concentrated its selling efforts upon one make of fan, although it might carry small stocks of several makes. The general manager of the fan division of the Akbane Manufacturing Company stated that wholesalers' gross margin on fans was approximately 15% and that the net profit probably did not exceed 2%. He further stated that each wholesaler's annual sales of Akbane fans amounted to from \$15,000 to \$110,000. The wholesalers' stock orders placed at the beginning of a season, exclusive of the orders placed by the few wholesalers whose seasonal fan purchases amounted to \$100,000 or more, averaged about 40% of total fan purchases for the season, the remaining 60%

being purchased on fill-in orders. The few very large wholesalers ordinarily ordered two carloads of fans at the beginning of a season and placed fill-in orders for the remainder.

In 1927, when the issue arose as to the advisability of consigning fans to wholesalers, the company's sales terms were 2% 10 days, net 30 days, or 60 days trade acceptance without interest. The company sold its fans f.o.b. New York or Chicago, but made freight allowances which, except in instances of very small shipments, were about equal to the freight charges. The sales period for electric fans varied in different parts of the United States and with different weather conditions. It seldom was longer than four months in any part of the country, however.

The company advertised its fans in newspapers and in trade journals. Because of the brevity of the selling period for fans, it preferred to advertise in daily newspapers rather than in general magazines issued less frequently. Akbane fans had no outstanding features that distinguished them from other makes of fans, and prices were comparable.

The company's consideration of the consignment problem was precipitated by the action of several outstanding competitors in adopting a plan of consignment sales. Those firms shipped fans to distributors upon consignment; made collections after the distributors had sold the fans; and permitted unsold fans at the close of the season to be applied against next year's orders. In this way, it was unnecessary for the distributors to make any actual investment in fans. After this plan had been introduced by competitors of the Akbane Manufacturing Company, that company's distributors asked it to sell on the same terms. Those independent wholesalers were eager for any concession on the part of the manufacturer that would help them to compete more satisfactorily with the electrical wholesale firms owned by large manufacturers of electrical products.

For a year or two prior to 1927, the company had had in effect a compromise plan designed to protect wholesalers having surplus stocks of fans on hand at the close of the season. Under this plan the company agreed to send to each wholesaler at the end of the selling season a check for one-half the purchase price of the wholesaler's stocks of Akbane fans. The fans were to be retained in stock by the wholesaler and were to apply against his orders for the following year. The manager of the fan division

stated that electric fans had become well standardized, so that the fans made by different companies were practically the same, and that only very minor changes were made in the fans from year to year. While this plan was in effect, stocks of Akbane fans held by wholesalers at the end of a season amounted to about  $7\frac{1}{2}\%$  of the company's gross fan sales for the season.

In 1927, when the company was considering a plan of consignment sales, it was desirous of obtaining additional distributors for its fans, in view of the increases that had taken place in the number of electrical wholesalers and the decreases in the size of their territories. The executives anticipated that it would be difficult to obtain additional distributors unless the company agreed to consign goods to them, inasmuch as other manufacturers of fans were selling on that basis. The executives did not anticipate that failure to inaugurate such a plan would cause any of the company's present distributors to discontinue the Akbane line, nor had orders from wholesalers declined. Good relations with wholesalers would be fostered, however, by adoption of the plan.

Another advantage that the manager of the fan division saw in the proposed plan was the greater control that it would afford the company over the location of stocks of Akbane fans. In view of the short selling period for fans and the direct influence of weather conditions upon their sales, it was of great importance to have stocks of fans available coincidently with demand. If the company shipped fans on consignment, it would have more control over the placement of its stocks than it did when selling outright. Under the plan of outright sale, wholesalers tended to let their stocks become unduly small toward the middle or close of the season, in order to avoid carrying excess stocks through the winter. The manager of the fan division said in this connection:

There is no question but that under the plan of out-right purchase distributors lost considerable business during the latter part of the season through failure to keep up their stocks because of the fear of a carry-over stock through the winter.

The chief objection to the plan was the cost of maintaining unsold stocks of fans in the hands of customers. There was the further possibility that distributors would be disinclined to push sales of goods which had cost them nothing. The manager of the fan division, however, was of the opinion that it was the manufacturer's place to bear the inventory burden in the case of



an item such as fans, for which the sales risk was large as compared with items sold throughout the year and not so largely influenced by weather or other conditions beyond the control of the distributors.

The company decided to ship fans to distributors on consignment. The chief factor in this decision was the action of competitors in adopting such a plan, which made it extremely difficult for the company not to follow suit. After the plan had been in operation for a year, however, the manager for the fan division declared it sound in his opinion. Reports from distributors, he stated, showed evidence of increased interest on their part in Akbane fans. Marketing expense, he also stated, was not affected materially by the new plan of sale.

Under the plan as adopted, the company entered into contracts with distributors between November 1 and April 1, the contracts to expire on September 1. By the terms of these contracts, the company, upon receipt of orders from wholesalers, sent fans to them on consignment. On the twenty-fifth of each month the wholesalers reported to the company their sales since the twenty-fifth of the preceding month. The company then invoiced the fans sold as of the first of the month following the date of the report and extended credit terms of 2% 10 days, 30 days net. No change was made in the discounts to wholesalers. During the first year that this plan was in effect, the company experienced no difficulty from lack of punctuality in sales reports made by the wholesalers. A physical inventory of the wholesalers' stocks of Akbane fans was taken once a year by a representative of the company; no serious discrepancies had been discovered.

When orders were received from wholesalers, especially initial orders for a season, the manager of the fan division considered them critically to determine whether the quantities ordered were reasonable. If he decided that they were too large or too small, he might seek to persuade the wholesalers to modify their orders, or, in the case of certain wholesalers who he knew were willing to depend upon his judgment, might himself modify them. In the first year that the plan was in effect, the manager had more occasion to increase than to decrease wholesalers' orders. He stated that wholesalers wished to make a favorable impression on the company and consequently did not want to have large stocks of fans left over at the end of the season. Stocks in wholesalers'

hands at the close of the selling season were held there and applied against orders of the following season.

COMMENTARY: This case presents an interesting example of the consignment of stocks to distributors to guard against loss of potential sales of a commodity for which demand was highly seasonal. The Akbane Manufacturing Company practically was forced, by the action of competitors, to adopt the consignment plan. The case is significant chiefly, therefore, as an illustration of the development of a new trade practice rather than as it narrowly concerned the Akbane Manufacturing Company.

The consignment plan apparently was started in this industry as a means of forcing distribution. It did result in having stocks available in distributors' hands as protection against loss of potential sales. It is by no means clear, however, that the aggregate sales of fans were enhanced by this scheme, or that it was beneficial to the fan manufacturers generally.

Under the consignment plan the manufacturers assumed the cost of carrying the inventory previously borne by the distributors and, at the same time, no change was made in the wholesalers' discounts. Hence the aggregate costs of marketing fans were increased, and the industry was saddled with a practice which eventually may be deemed objectionable. If such proves to be the case, however, the responsibility lies primarily with the manufacturers who inaugurated the practice rather than with the Akbane Manufacturing Company.

The experience of the company in receiving punctual and accurate reports from its distributors on sales of consigned stocks is noteworthy. In some other industries manufacturers have experienced seemingly insurmountable difficulties in obtaining satisfactory and dependable reports on sales and inventories of consigned merchandise.

February, 1929

M. T. C.

## MORGAN CONSTRUCTION COMPANY

### MANUFACTURER—WIRE DRAWING MACHINES

**SALES TERMS—***Discontinuance of Plan of Sale on Trial.* A company manufacturing machinery of high unit value began to market an improved type of continuous wire drawing machine. To overcome anticipated sales resistance to the new product, use of which would necessitate various changes in production practices, the company decided to offer to potential purchasers a free trial period of six months. Later the free trial offer was withdrawn because of the unfavorable impression it was thought to create in the minds of potential users.

(1922-1928)

In 1922, after several years of developmental work, the Morgan Construction Company, located in Worcester, Massachusetts, was ready to market an improved type of continuous wire drawing machine. At that time a question was raised as to the advisability of offering to ship the new wire drawing machines to potential customers' plants upon trial. Six months was suggested as a suitable trial period.

The Morgan Construction Company's major sales volume was of machines of very high unit value used by large steel producers. Those machines were for the most part made to order and were extremely technical; each sale involved complicated engineering problems. In addition to machines for the steel industry, the company for many years had manufactured wire mill machinery. Morgan products were of high quality and, in its relations with its customers, the company had established a reputation for reliability.

Prior to the development of the improved Morgan continuous wire drawing machines in 1922, continuous drawing from wire rod of 12, 13, or 14 gauge wire had not been successfully accomplished, although smaller sizes of wire had been drawn by continuous process for many years. With the new Morgan machines it was possible to draw 12, 13, or 14 gauge wire by means of 4 or 5 continuous drafts, i. e., reductions in diameter. Without the use of those machines, it was the practice to make four or five separate drafts to accomplish the same end. The improved



machines made it possible for operators to increase their output about 50%.

Before preparing to market its new machines, the Morgan Construction Company had carried on practical tests and experiments on a completed machine for a year; during that time the experimental machine was subjected to modifications in design and construction. The machines were priced at approximately \$6,000 each.

The market for the improved Morgan machines was confined to wire manufacturers and manufacturers of wire products, in cases where they drew their own wire, who had sufficient volume of production to warrant the purchase of at least two of the machines, or an investment of \$12,000 to \$14,000. An installation of less than two machines was uneconomical because the machines were designed so that one man easily could operate two of them; if a single machine was installed, the operator would be busy less than 50% of his time. An executive of the company stated that another narrowing factor in the scope of the market was the fact that the most prosperous of the small firms drawing wire were engaged in the manufacture of wire specialties requiring the development of highly specialized machinery. Ordinarily, this executive stated, those firms made their own machinery and were reluctant to accept machinery of a design other than their own and to make the changes in their practices which the introduction of such machinery entailed, even though to do so would reduce their production costs. To a much smaller extent the larger wire drawing plants developed their own machines and tended to be hostile toward other makes of machinery.

Use of the new machines in many instances would necessitate improvement in the cleaning house practices of customers, and this fact might make some firms unwilling to purchase the machines. Before wire was drawn it was subjected to a cleaning process and, with continuous drawing of wire, proper cleaning methods were particularly important. The Morgan Construction Company also anticipated some resistance to its new machines on the part of engineers and machine operators in prospective customers' plants who were accustomed to standard methods and who would be loath to learn new practices.

The company estimated that the total number of good potential customers for the improved wire drawing machines was less

than 100. To many of these firms the Morgan Construction Company already was known through its sale of other machinery.

In 1922, when the question of trial shipments was raised, the company had 100 of the improved wire drawing machines either finished or in process. These it was desirous of moving as rapidly as possible. Under the trial arrangements proposed, the company would ship a machine, at its own expense, to the plant of a prospective customer who wished to give the machine a trial. The machine would be permitted to remain at the prospective customer's plant for six months. If in that time the machine met the requirements as to tonnage produced and as to quality and gauge of product that the company had told the customer it was designed to meet, the customer was expected to purchase the machine and to bear the freight charges. If, on the other hand, the machine failed to meet the stated requirements, the customer could return the machine to the Morgan Construction Company and that company would bear the return as well as the outgoing freight. It was recognized that if this plan was adopted it would be necessary to accept returns of the machines, if the customers wished to return them, regardless of whether or not they met the stated requirements.

The machines required only electrical installation. With each wire drawing machine that it sent out, whether on trial or on outright sale, the company planned to send a man to make the installation and to instruct employees in the user's plant in the operation of the machine. This man would be expected to remain until the machine gave the results that the company had stated it would give. The cost of demonstration was included in the sale price of the machines.

The chief argument in favor of trial shipments was that the machines in a sense still were in the developmental stage and that, to adapt the machines perfectly to various conditions, the company needed information that it could obtain only by observing the machines in operation under typical conditions existing in users' plants. With the background of the performance of the experimental machine which had been in actual operation for a year, the company was confident that for the more common and standard uses its machines were thoroughly satisfactory, producing large economies in production. There was a growing use, however, of high carbon and special alloy steels and, while there was

little doubt that the new Morgan machines could be made satisfactory for use on such metals, it was likely that various modifications in the machines would be necessary. It was possible for the company to experiment with use of various special steels at its own plant, but the executives were of the opinion that such experiments could not be fully satisfactory and that it was important that the machines be tried out in the plants of wire producers under actual operating conditions. If the company could have its machines installed on a trial basis in various types of wire drawing plants, it would be able to carry on this needed experimental work. Moreover, the company anticipated that its improved machines would prove so superior to other wire drawing machines on the market, even under special conditions for which they had not as yet been thoroughly tested, that a firm which once had used one would not wish to return it. The very superiority of the machines was looked upon as another reason for making a trial offer, since potential customers might tend to be incredulous of the company's claims for the machines.

The principal argument that was advanced against use of a trial plan was that such a plan would weaken the company's position in the eyes of its customers. The company was well known in its own markets as a manufacturer of the highest grades of machinery and as a firm which was meticulous in making its claims good and in giving satisfaction to the users of its products. A trial offer might appear to be a tacit admission that the company's claims for its new product needed verification. The company never had sold any of its products on trial. Moreover, if a machine was returned, no matter what the reason, this would create a bad impression. It also was possible that in the six months of the trial period the financial conditions of a firm accepting a machine on trial might change so that the firm would be unwilling to retain the machine even if it was entirely satisfactory. Also, engineers and wire drawers in customers' plants who were hostile to the new machines might tend not to give them a fair test if they were installed merely for trial.

The company finally decided to offer to ship its improved wire drawing machines on a trial basis. This offer would not be stressed and would be made only when an outright sale apparently could not be made and when the company wished to have



one of its machines in operation in the prospective customer's plant for purposes of experimentation.

In view of the limited number of prospective customers upon whom the company expected to concentrate its efforts, it was possible for the sales manager for the wire drawing line to give personal attention to each one. The company had one of its machines for demonstration purposes in operation in the plant of a large wire producing company in the city in which it was located, and it invited those of its prospective customers who were within a reasonable distance from the plant to visit the plant and observe the machine in action. Customers who came to the Morgan plant to make arrangements about other products of the company also were shown the demonstration machine.

In the six years following the introduction of the new machines, not more than eight shipments, or less than 10% of the total shipments which the company made of its improved wire drawing machines, were made on a trial basis. The rest were shipped to firms buying outright. The first shipments made were on outright sales to large producers for whose work the company was confident that its machines were suited. The first 58 machines sold were sold to 16 firms. In practically every instance in which a trial shipment was made, the object of the shipment was to provide information which the company needed as to the operation of its machine under different conditions. As a result of information obtained in this way, the company made several desirable modifications in its machines.

In 1925 the treasurer of the Morgan Construction Company in a report to the president made the following comments on the trial shipment plan and on the market for the wire drawing machines.

*On Trial Shipments:*

Our books now show, among others, the following improved wire drawing machines "on trial":

1 machine at \_\_\_\_\_ Co. This is the first machine of this type that we ever built, and it is located at the \_\_\_\_\_ wire plant of the \_\_\_\_\_ Co. for demonstration purposes.

2 machines at \_\_\_\_\_ Co., \_\_\_\_\_, the steel works with which Mr. \_\_\_\_\_ is associated. These machines were shipped there in 1922 for demonstration purposes.

In my opinion these machines should not be carried under the heading "On Trial Shipments," but should be classified as "Wire

Department Selling Equipment" and should be charged with depreciation annually at the rate of 10% which in turn should be a charge to the Wire Department. The heading "On Trial Shipments" should be reserved entirely for machines which are actually "on trial."

If these machines at ——— Co. and ——— Co. are to be set up as "Wire Department Selling Equipment" the value which is to be depreciated 10% annually should be the full formula cost of these machines and their electric equipment.

Under no conditions should a machine remain "on trial" for a period of more than six months, for to do so might create in the prospective customer's mind the thought that the company was unable to move the machine elsewhere.

The general practice of "On Trial Shipments" is bad, particularly now that there are 53 ——— machines that have been in operation for two years or longer. The machines seem to have demonstrated all that we originally claimed for them and in several instances they have exceeded these claims. Occasions may arise where, for competitive reasons, an "on trial" period may be advisable, but it does seem as if the majority of sales should be clean-cut with no strings attached to them. This company has ample reputation for square dealing which ought practically to eliminate "on trial" shipments.

#### *Market:*

What is the real market for these machines? Is it narrowed down to the 16 firms that we have already sold? It is my general belief that a much larger market is open. I believe that the full extent of the ——— machines market cannot be determined until these questions are answered.

1. How many wire blocks are there in this country?
2. How many new blocks are added each year?
3. How many replacements are made each year?
4. To what part of this market might ——— machines be applied?

From the above statistics a schedule should be made showing the number of machines which would be required to supply the market 100%, and a list of prospects prepared, along with their individual requirements. With this list in front of us, we should ask ourselves:

1. How many of these prospects have been approached?
2. How often have they been approached?
3. When were they approached?
4. What was the result of these calls?

I believe further that we should know how many inquiries are on hand and the present status of each.

We have on hand 37 of these ——— machines, ready for immediate delivery excepting for the electrical equipment. I strongly urge that an intensive campaign be carried on for a period of 3 months with bi-weekly reports from the salesman, in an effort to move the 37 machines now held in stock. If all of the 37 have been moved at the

end of 3 months, all well and good. If only a few have been sold, we shall at least have sufficient evidence of the principal resistances to sales and perhaps we can overcome them.

No action was taken with reference to these recommendations as to a market survey, inasmuch as the sales department was satisfied that the company already was in possession of sufficient data as to the markets for the machines.

In another report to the president, also made in 1925, the treasurer summarized the company's trial shipments as follows:

*On Trial Shipments:*

Mr. A. mentioned that he was shipping to \_\_\_\_\_ Co. two machines early next year. Mr. B. asked him why he was always selling "on trial." This question opened up the "on trial" question and gave me quite a bit of information I wanted about past experience with "on trial" sales.

\_\_\_\_\_ Co.: 2 machines. I had always been under the impression that the machines shipped to \_\_\_\_\_ Co. had been shipped "on trial," but Mr. A. corrected me, stating that Mr. C. made the sale to \_\_\_\_\_ Co., there being no "on trial" stipulation in the deal. When \_\_\_\_\_ got the machines there were many complications encountered; as I recall it was largely their lack of interest which might spur them on to make the machines go, which eventually culminated in their abandoning the machines. I believe inability to establish good cleaning house practice and labor conditions were the chief items which finally led to the abandonment of the machines. Mr. A. and Mr. C. agreed that it was a detriment to future sales of \_\_\_\_\_ machines to have them standing idle, and they decided that it would be better to have the machines removed from the \_\_\_\_\_ plant.

\_\_\_\_\_ Co.: 2 machines. These machines were sent on trial and have stayed.

\_\_\_\_\_ Co.: 1 machine. This machine was sent on trial, as this company expected that its business might require a machine that would do four hole work such as the \_\_\_\_\_ machine was designed to do. We also were very glad to send the machine to them as the ability of the machine to do high-carbon wire drawing had not been established, and a golden opportunity was afforded for us to do some experimenting with the machines. The trial was satisfactory, but the business that the \_\_\_\_\_ Co. expected to develop which would require four hole work did not develop and the machine was returned. As I have stated elsewhere in reporting this conversation, the \_\_\_\_\_ Co. is a prospect for 1926.

\_\_\_\_\_ Co.: 1 machine sent on trial and it stayed.

\_\_\_\_\_ Co.: 2 machines sent for demonstration and competitive purposes. A large number of competitors' machines were sold to



———— Co., 88 in number. These machines were bought after a competitive run of our machines against 30 of the competitor's machines at the ————— plant of the ————— Co. During the run, our machines made a run that was entirely satisfactory to Mr. ————— but the prospective customer bought the competitor's machines because they wanted to standardize on one kind of equipment and because Mr. ————— knows that they did not get the accurate performance figures of our machines, in comparison with the accurate performance figures of the competitor's, and because the man in charge of the ————— Wire Mill had a personal preference for the competitor's machines.

———— Co.: 2 machines. These machines were retained, and four more have recently been ordered by this company.

The treasurer of the company was of the opinion that the offer of trial shipments was a mistaken policy. It was true, he stated, that under this plan a few machines had been shipped sooner than otherwise would have been the case. However, in his opinion, this had not hastened actual sales; he believed that the companies which bought the trial machines at the end of the trial period would have purchased the machines outright by that time even with no trial plan in operation. His chief objection to the plan, however, lay in the unfavorable impression it might create in the minds of users. By 1928 the policy of offering trial shipments had been abandoned except for rare instances in which the company wished to conduct experiments in order to meet new conditions in the wire drawing industry.

COMMENTARY: The experience of the Morgan Construction Company is enlightening for those manufacturers of industrial equipment who are urged or tempted to sell "on trial" after the equipment has demonstrated its potential performance. Under some conditions, as was exemplified by several instances in this case, trial installations for experimental purposes may be warranted. A sale "on trial" also may be warranted for the initial installation of a new type of machine whose potential performance has not been demonstrated, just as the Warren Textile Machinery Company<sup>1</sup> found it advantageous to grant concessions in credit terms to facilitate an initial sale.

After a new type of machine has demonstrated what it can perform, however, the experience of the Morgan Construction Company indicates that it is better to insist on outright sales rather than to sell "on trial." Under such circumstances an offer to sell "on trial" seems fully as likely to increase sales resistance as to lessen it. Unless

<sup>1</sup> 3 H.B.R. 371.

the potential customers are sufficiently interested to risk investing in the machines, when buying from a reputable company, there is a danger that they will not give bona fide tests to machines installed "on trial" or that they do not really need them. If machines installed "on trial" are not retained by the users, the seller is likely to find that the reputation of the machines has been impaired among other potential customers who cannot be informed readily and effectively of all the conditions which led to the rejections by the "on trial" users.

November, 1928

M. T. C.

## REMSEN SHOE MACHINERY COMPANY<sup>1</sup>

### MANUFACTURER—SHOE REPAIR MACHINERY

#### SALES TERMS—*Interest Charged on Overdue Notes of Installment Purchasers.*

A company which manufactured shoe repair machinery made most of its sales for installment payments, taking customers' notes for the unpaid balances. The amount of notes overdue at any time was substantial, but the company, like its competitors, never had charged interest on them. Although the company believed that interest properly should be charged on overdue notes, it decided not to institute such a practice generally, in view of the possibility of antagonizing actual and potential customers, but to experiment with interest charges in one city.

(1928)

The Remsen Shoe Machinery Company manufactured stitchers, finishers, and small tools for sale to shoe repair shops and harness shops. The major part of the company's sales were made on time payments. Although customers frequently failed to meet their notes when due, the company never had charged interest on overdue notes. In 1928 it was recommended that interest be charged.

The company had been engaged in the manufacture and sale of shoe and harness repair machinery for about 20 years. As motor vehicles replaced horse drawn vehicles to a large extent, the shoe repair part of the business assumed relatively greater importance. The company was able to supply practically all the machine needs of shoe repair shops, and it was customary for such shops to buy as many of their requirements as possible from one manufacturer. The initial machine purchases of an average shoe repair shop, an executive of the company stated, amounted to \$1,000 to \$1,200.

The Remsen Shoe Machinery Company sold its products directly to users by means of its own salesmen. In 1928 it had 75 salesmen and demonstrators operating in the 12 sales districts into which it had divided the United States. In most instances sales work and demonstration work were done by different men.

<sup>1</sup> Fictitious name.



In each territory there was a manager who had full direction of the work in the territory. The salesmen were expected to exercise discretion in the matter of selling machinery to persons who wished to open repair shops, and not to encourage persons to buy whose likelihood of success seemed small. The general sales manager stated, however, that the salesmen were eager to make sales and in reality paid little attention to this factor. He was of the opinion that the company should undertake to exercise more care in this respect.

The salesmen were paid salaries and expenses and were allowed commissions on all sales over a basic amount. In 1927 the company had established sales quotas for each salesman. The quotas were for the purpose of arousing competition among the salesmen and did not directly affect their compensation. Each salesman was given a monthly sales report for all the territories. The general sales manager also wrote weekly letters to the salesmen.

Demonstration of the machines was necessary inasmuch as they were technical and many of the men operating repair shops had little mechanical training or ability. The company made no direct charge for demonstration. For two years after purchase, moreover, the company serviced the machines without cost to the users. After that time it made a small charge for service, sufficient to pay about 75% of the actual cost of the service. The company deemed it necessary to provide this free repair service in order to protect the reputation of its machines. It had found that men operating shoe repair shops in villages and small towns commonly were competent to make their own repairs but that repair shop operators in cities, many of whom were of foreign birth, usually were helpless in the face of mechanical trouble.

In 1928 the company's terms on installment sales were an initial payment of 20% of the sale price and the remainder in 30 equal monthly payments; the company held customers' notes for the unpaid balances. Prices were based on time payments, so that on cash sales the company allowed a discount of 15%. By far the larger number of the company's sales were made on the installment plan. Payments were to be made directly to the company's general offices, although the salesmen were charged with the collection of difficult accounts.

The general sales manager of the company stated that since its establishment the company had maintained what might be

termed a paternalistic attitude toward its customers. The men operating repair shops commonly looked to the company to finance them. Frequently the company received letters from customers stating that their wives were sick or that some other circumstance had arisen which made it impossible for them to meet their monthly payments. Then, when these customers were able to begin payments again, they did not at once meet the full amount of the back payments but simply made one payment each month thereafter until the full amount had been met. Apparently the idea that interest might be charged on the overdue notes did not occur to the company's customers.

The company's losses from bad debts were small. When a customer was unable to complete his payments, the machinery that he had purchased reverted to the company. Overdue accounts were somewhat more serious. At one time in 1927, and this situation was thought to be typical, of \$1,250,000 of customers' notes held by the company, 10% were from one month to one year overdue.

The Remsen Shoe Machinery Company had four leading competitors. Their prices were comparable to those of the company but their sales terms, an executive of the company stated, were slightly more liberal and were not so strictly adhered to; that is, those companies made exceptions to their terms in particular instances in order to effect sales. Until six or eight years prior to 1928, the Remsen Shoe Machinery Company had required an initial payment of 25% of the total sale price. Because of the action of competitors in granting easier terms, the company had found it necessary to reduce the initial payment to 20% of the total. None of the competing manufacturers charged customers interest on overdue notes.

It was proposed, in 1928, that the Remsen Shoe Machinery Company should make such an interest charge, probably amounting to about 6%. It seemed proper to the executives that customers should pay an interest charge, since, if they obtained the use of money from other sources, they would be required to pay interest. The levying of an interest charge, moreover, might make customers more aware of their responsibilities and less prone to postpone payments. As it was, there appeared to be a tendency for certain of the customers not to take the company's sales terms with sufficient seriousness. Some customers, moreover, delayed

payments, in order, it was thought, to induce the company to provide free service for a longer period; as long as a substantial amount was owed on a machine it was impracticable for the company to refuse to give service if it was needed.

If the company did charge interest on overdue notes, on the other hand, it was possible that its customers, most of whom had little knowledge of modern business practices, would feel that the company was taking advantage of them. This was particularly likely to be the case since none of the company's competitors made such a charge. The general sales manager stated, that, in making sales to the company's market, sales terms were an important consideration, ranking far ahead of price in the minds of customers.

Because of the possibility of disrupting customer relations, the company decided not to institute an interest charge on overdue notes to apply throughout the country. Instead it decided to experiment with such a charge in one large city. The company was the more willing to do this inasmuch as it seemed probable that competitors would undertake a similar experiment in the same city.

**COMMENTARY:** The determination of credit terms and the degree to which those terms shall be adhered to are ever present questions in industries in which goods are sold on credit. The Remsen Shoe Machinery Company, and its competitors, had adopted the practice of selling equipment to shoe repair shops on long-term credits on which payments were made in installments. In that industry the purchasers commonly were men of small means, who could not afford to pay outright for such expensive equipment. Under the installment plan they could pay for their equipment out of its earnings.

After the amount of the down payment and of each installment had been fixed, the plan did not work automatically, however, since purchasers occasionally were forced by unforeseen misfortunes temporarily to cease making payments or wilfully neglected making them. The seller, under such circumstances, could take repossession of the equipment, but that step naturally was deferred until other means of obtaining payment, without nullifying the original sale, had been exhausted.

The Remsen Shoe Machinery Company in this case was concerned with the problem of making collections on overdue accounts. The objective was not primarily to lessen losses from bad debts, which were small, but to avoid the burden of carrying overdue accounts and to prevent unfair discrimination against the large majority of customers who paid their notes promptly.



Inasmuch as only 10% of the customers' notes were overdue, the amount of the carrying charges thereon was not a large sum; the extent of the resulting discrimination was narrow; likewise, the potential loss of sales, if the company failed to meet the lax methods of competitors, also was not weighty. A charging of interest on overdue accounts probably would have had small influence on the wilfully negligent customers and it would have been an additional burden to those customers who were forced by misfortune to defer payment of installments when due.

Nevertheless, the integrity of a credit policy depends upon the rigorous enforcement of its terms, and there was no more reason for the Remsen Shoe Machinery Company to refrain from charging interest on overdue accounts than there is for laxity in credit management under other conditions. When a customer was unable temporarily to meet his payment obligations, it was a favor to him to permit him to retain the equipment, and the payment of interest on the overdue amount would have been no more than a fair contribution from him. The charging of interest on overdue accounts would have aided the company in preserving the integrity of its credit policy.

November, 1928

M. T. C.

## OTWELL BOTTLING MACHINERY COMPANY<sup>1</sup>

### MANUFACTURER—BOTTLING MACHINERY

**SALES TERMS**—*Amount of Monthly Installment Payments Adjusted to Meet Seasonal Trend of Purchasers' Sales.* A company which manufactured bottling machinery and made most of its sales under a plan of deferred payments customarily had required customers to pay the balance of the purchase price due after delivery in 18 equal monthly installments. Because sales of the company's customers showed a decided peak during the warm months, the company decided to revise its plan so that installment purchasers would make larger monthly payments from May to October inclusive than during the remainder of the year.

**SALESFORCE COMPENSATION**—*Commissions Paid Pro Rata to Collections from Customers.* A company which manufactured bottling machinery and made most of its sales under a plan of deferred payments decided to pay commissions to its sales representatives pro rata as collections were made from customers and not in full at the time of sale, as had been its practice.

**COLLECTIONS**—*On Consignment Sales Made from Consignee Rather Than Directly from Purchasers.* A company which manufactured bottling machinery consigned stocks of repair parts to its agents. The company decided to make collections for sales of such parts from the agents, who would be expected to sell the parts for collection on delivery, rather than directly from the purchasers as it had done in the past.

(1928)

The Otwell Bottling Machinery Company sold its machines to companies bottling carbonated beverages. Most sales were made on a plan of deferred payments. It had been the company's practice to require each customer to make an initial cash payment and to pay the remainder in equal monthly installments. In 1928, however, it was proposed to require larger payments in summer than in winter months. At the same time it also was proposed that commissions to the company's sales representatives should be paid pro rata as collections were made from customers and not in full at the time of sale, as had been the company's practice. It further was proposed that the company should bill its sales representatives, who carried stocks of repair parts on consignment, for parts sold, rather than bill the purchasers

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<sup>1</sup> Fictitious name.

directly, as then was being done. If this plan was adopted, the sales representatives would sell the parts on a C. O. D. basis. The company undertook to decide these issues in the light of the general marketing situation.

The Otwell Bottling Machinery Company manufactured machines for washing bottles, machines for carbonating water, and machines for filling and capping bottles. The largest bottling machine that the company made could fill 120 cases, or 2,880 bottles, an hour. This machine was priced at \$5,000. A washer for this machine sold for \$4,000; and a carbonator sold for \$1,350. The company also manufactured smaller bottling machines, one type of which had a capacity of 35 cases an hour, and was priced at \$1,150. Sales efforts, however, were directed primarily to sale of the large machines. The company's annual sales volume was approximately \$1,000,000.

In the bottling industry there were two classes of companies, —those using high pressure units and those using low pressure. The low pressure units were designed for quantity production and were used by the relatively small number of very large bottling plants. The Otwell Bottling Machinery Company made few sales in that market; it concentrated upon the high pressure field. In that field the company had only one large competitor, although there were 4 or 5 other companies manufacturing such machinery. An officer of the company stated that there were in the United States between 8,000 and 9,000 bottling plants and that 85% of the total quantity of carbonated beverages bottled were bottled by about 15% of the total number of bottling plants.

The company maintained a force of 4 salesmen and 12 erectors and was represented by 20 firms selling machinery and supplies for the carbonated beverage industry. The supply firms had exclusive territories and sold Otwell machinery on a commission basis. They also carried stocks of repair parts for the company's machines. In most instances these stocks were held on consignment, but in a few instances the supply firms bought the parts outright from the company. The company's erectors installed Otwell machines sold either by the company or the supply firms and also instructed purchasers in their use. An erector often spent as much as a week with a purchaser. The cost of this service was covered by the price of the machines, so that no separate charge was made.



Purchasers of Otwell machines were for the most part small companies of limited means. They could not afford to buy outright for cash. This being true, the Otwell Bottling Machinery Company might have rented its machines. This plan, however, had been rejected in favor of a plan of deferred payments. The company's chief objections to a rental plan were: if machines were rented there was more likelihood that they would be returned and have to be disposed of again; users were less likely to take good care of rented equipment than of equipment that they owned; under a rental plan a longer period would be required for obtaining full value for a machine. The company knew of a manufacturer who at one time had rented bottling machinery under an arrangement whereby the users were required to buy bottle caps from the manufacturer and to pay for the machines on the basis of the number of caps used. This manufacturer, however, had been interested primarily in the sale of caps. The arrangements just described had been discontinued inasmuch as they were construed as conflicting with the anti-trust laws.

The Otwell Bottling Machinery Company's terms for some years had been 10% of the total sales price with the sales contract, 15% upon delivery, and the remainder in 18 equal monthly payments. For the unpaid balance the company took judgment notes, bearing 6% interest, that enabled it to make collections against any property of its customers. The initial payment, 10% of the total contract price, was expected to cover all expenses involved in getting the machinery to a customer and in bringing it back. Freight costs were charged to customers, but the company wished to be protected in case a customer refused to accept delivery of a machine ordered or in case he was unable or unwilling to make the payment required upon delivery of the machine, so that it became necessary for the company to return the machine to the plant. The 15% of the total price that was required upon delivery was fixed at that amount in order to cover salesmen's and agents' commissions, which were 15% of the selling price after deduction of any allowance made for used equipment traded in. The company allowed a discount of 5% for cash.

Under these sales terms the company had had a substantial volume of overdue notes. Overdue notes were particularly numerous during the winter months. It was the company's experience that, when a customer once failed to make a monthly

payment, he was more likely to fail again the next month. Moreover, if a man could not pay a note in full, he seldom paid any part of it. Executives of the company recognized a direct relation between the volume of notes overdue and the seasonal fluctuations of the bottling industry. The company figured that about 75% of a bottling company's income was received during the five to seven months of warm weather. It was in view of this fact that the company proposed to vary the amount of the notes according to the months in which they would fall due. A division of 10% of the total balance due, after the initial payments, in each warm month and 2% in each cold month was suggested; also a division of 9% and 3% and a division of 8% and 4% were suggested. The total period required for payment was not to be changed.

In deciding this question, the executives consulted the salesmen and also half a dozen bottling machine users. All were agreed that it was advisable to require smaller payments in the cold than in the warm months, and most of those consulted preferred a division of 8% during each of the months May to October inclusive and 4% during the months November to April inclusive. The company, therefore, decided to adopt this plan. In the six months following its adoption, the plan proved acceptable to customers and satisfactory to the company. With the adoption of this plan the company decided to be more stringent in its collections. If customers failed to meet their notes, except for unforeseen and valid reasons, the machines would be removed. In the previous 3 years 5% of the total number of machines sold had been removed by the company. In the 6 months following the adoption of a more stringent collection policy the company removed 12 to 15 machines, which meant a much larger proportion than previously had been taken back.

Practically every sale made by the company involved the acceptance of a piece of used equipment in trade. The company accepted used bottling machinery of its own make and also of other manufacturers' makes. For its own machines it established standard trade-in allowances, and the supply firms could not exceed those allowances except with the approval of the sales executives of the company or unless the supply firms themselves were willing to pay the excess allowances out of their commissions. For machines of other makes no standard allowances were set;

each case was decided on its own merits by the salesmen or supply firms in consultation with sales executives of the company. The allowances given on used machines were not based entirely on the sales value of the machines. In almost every instance the company allowed more for a used machine than it was able to resell it for. The company estimated that the resale value of one of its machines at the end of 18 months' use was about 30% of its original value. The actual operating life of the machines was long, but the market value of a used machine was relatively low. Replacement of machines began after about three years of use. The company's allowance for a used hand-feed bottling machine less than one year old, the original sale price of which was \$1,800, was \$1,000 if traded in for a new automatic machine or \$600 if traded in for a new hand-feed machine. Such a used machine could be rebuilt to sell with a new machine guaranty for \$300. For a used hand-feed machine from one to two years old, the company's standard allowance, if the machine was traded in for a new automatic, was \$900.

Inasmuch as the company customarily sold used machines taken in trade for less than the trade-in allowance given, it was necessary to make a provision for this difference in the prices of new machines. The company's price of \$5,000 for its automatic bottling machine was built up as follows. The factory cost for one of these machines was \$2,000. All other expenses, except agents' and salesmen's commissions, together with what the company deemed a fair profit, amounted to \$1,400. To the sum of these two items was added \$1,000 as an allowance for used equipment accepted in trade and \$600 for sales commissions, which represented 15% of \$5,000 less the \$1,000 allowance; \$1,000 was the maximum standard allowance for the type of Otwell machine most commonly offered in trade.

\$2,000	Factory costs
1,400	All sales and other expenses, except commissions, and profit
1,000	Maximum trade-in allowance
600	15% sales commission
<u>\$5,000</u>	Selling price of new machine

The company sought to obtain for each \$5,000 machine a net amount, exclusive of commissions and trade-in allowances, of \$3,500. Individual transactions tended to offset each other. For example, one transaction might be as follows:



\$5,000	Selling price
<u>1,000</u>	Allowance on used machine
\$4,000	
<u>600</u>	Agent's 15% commission
\$3,400	Net to company
<u>500</u>	Received for used machine
\$3,900	Total received by company

and another transaction might be:

\$5,000	Selling price
<u>2,000</u>	Allowance on used machine
\$3,000	
<u>450</u>	15% commission
\$2,550	Net to company
<u>750</u>	Received for used machine
\$3,300	Total received by company

The company's average income from these two sales of new machines, therefore, would be \$3,600. It had to be borne in mind that the two sales of new machines involved two additional sales of used machines and that it was not uncommon for the sale of a used machine to involve the acceptance of another used machine in trade. Agents' commissions on used machines were the same as on new machines. Used Otwell machines accepted in trade were brought to the factory to be reconditioned before being resold. In most instances other makes of used machines were treated similarly. Customers giving used machines in trade were required to pay the freight on those machines to the company's plant.

The company did not give extra discounts or lower prices to customers not offering used machines in trade. It did not wish to encourage persons not already in the bottling industry to enter that industry. In the company's opinion the industry already was crowded.

It had been the company's practice to pay the supply firms selling its machines as agents the full amount of the commission on the money consideration of a sale during the month in which the sale was made. On a sale in which no used equipment was involved, this would mean that the company would receive \$1,250 from initial payments and would pay the supply firm \$750. In the event that the machine was taken back by the company because of the customer's failure to meet deferred payments when due, the company still had to bear the full burden of the commission.

It was proposed that a change be made so that the agents would receive their commissions not in one lump sum but in installments as payments were received by the company. Not only would this give the company protection in case of returned equipment, but it also would encourage the agents to see that customers met their notes as they came due. The company billed customers and made collections directly, but the agents, having direct contacts with users, could be of great assistance in the matter of collections.

The company decided to adopt the plan of paying agents' commissions pro rata, as collections were made from customers.

One other problem was given consideration by the company in 1928. That problem had to do with the sale of repair parts. It was the company's practice to consign stocks of repair parts to the supply firms selling its machinery except in a few instances in which the supply firms bought the repair parts outright. Supply firms buying outright were given a discount of 25% from list, which was the price at which the company sold to users, and they resold at such prices as they chose. Supply firms selling consigned stocks were given a commission of 25%. Whenever they shipped repair parts upon orders from users, the supply firms notified the Otwell Bottling Machinery Company, and the company then billed the purchasers. This plan necessitated much bookkeeping, and collection of the many small accounts was difficult.

The company decided consequently to have the supply firms make shipments to users on a C. O. D. basis, and to notify the company of shipments at stated intervals. The company then would bill the supply firms for the amount of the sales less the supply firms' commissions.

**COMMENTARY:** The use of the deferred payment plan was warranted in this case by the facts that the equipment was costly; the potential purchasers usually were firms of small financial resources; the firms purchasing this equipment on deferred payments were enabled thereby to pay for new equipment largely out of current earnings; and the equipment was of a type which permitted of repossession by the seller, without complete loss, in the event of the failure of the buyer to meet his payments. The decision by the company to change from a flat monthly rate of installment payments to a plan whereby the purchasers paid at higher rates during the months of

greatest seasonal activity in their industries promised better to coordinate payment obligations with earnings and thus to reduce the frequency with which buyers failed to pay their notes falling due during the months of slackened activity in their businesses.

The decision reached by the company to make remittances to its agents for commissions on sales pro rata as payments were received from customers was equitable. The initial payment by a purchaser covered the amount of the total commission on the sale, but it did not cover any allowance for depreciation in the event that repossession by the manufacturer became imperative. Under the old plan, if repossession became necessary or a machine was returned voluntarily by a buyer, the agent, nevertheless, retained his commission; he was paid for a sale not fully consummated. Under those circumstances the company was incurring risks that it properly could minimize by making its payments of commissions to its agents proportionate to the remittances received from customers.

The plan decided upon by the company for controlling payments for sales of repair parts, which were carried on consignment by its agents, by having the shipments sent to customers on C. O. D. terms was an interesting experiment.

February, 1929

M. T. C.



## ERLAND OIL COMPANY<sup>1</sup>

### REFINER—OILS AND LUBRICANTS

RECIPROCITY—*Dependence of Sales upon Reciprocal Purchases.* An oil refining company, confident that its lubricants and the technical service which it offered industrial users compared favorably with the products and services of competing manufacturers, wished to market its products on a quality and performance basis. The practice of reciprocity in purchasing that was followed by many firms manufacturing industrial goods, however, made it necessary for the company in many instances to depend for sales upon a diplomatic distribution of its patronage among its actual and potential customers.

(1923)

The Erland Oil Company was a refiner and distributor of fuel oils and lubricants. Its sales volume in 1927 was \$20,000,000, about 10% of which was of lubricants sold for industrial purposes. The company was confident that the quality of its lubricants and the technical service that it offered industrial users compared favorably with the products and services of competing manufacturers. The company, consequently, wished to market its products on a quality and performance basis. However, the practice of reciprocity in purchasing which was followed by many firms often made it necessary for the company to sell on a trading basis. An executive of the company stated in 1928 that the practice of reciprocity in purchasing had grown greatly following the World War. One of the company's chief problems in selling to the industrial market was to induce users to select their lubricants on the basis of intrinsic merit.

The Erland Oil Company employed 20 salesmen for the railroad market and 3 salesmen to visit steamship companies. These men were directed from the company's home office. All of them had some actual experience in the operation of railroads or steamships. They were familiar with the oil requirements of those markets and therefore were able to recommend the lubricants best suited to the customers' needs. The salesmen visited railroad

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<sup>1</sup> Fictitious name.

and steamship companies not only to solicit orders, but also to observe the performance of Erland lubricants.

The salesforce which the company maintained for selling to manufacturers and distributors reaching the general consumer market was managed through 14 division offices. Each division had its separate sales office and sales manager. In the 14 divisions there were approximately 375 salesmen. More than half their time was devoted to selling to filling station companies and other retailers of gasoline and lubricants; the rest of their time was spent in selling to manufacturing companies, power stations, and other users, not including railroads and steamship companies. The salesmen did not specialize on any one type of market except in centers where industrial companies were sufficiently numerous to warrant a separate salesman for them. The salesmen had no technical knowledge of the use of lubricants other than the practical knowledge acquired in selling. They usually visited each manufacturing customer eight to ten times a year even though his annual purchases were as low as \$200 or \$300.

Technical service to manufacturers was rendered by the company's oil experts. The company frequently met resistance to its efforts to give service, since many purchasers thought that they knew more about their lubricating needs than anyone else did. The Erland Oil Company, on the other hand, considered lubricating problems technical enough to require specialists; there were over a hundred kinds of oils and greases, each one best adapted to certain conditions. Upon receiving permission to make a study of a manufacturer's lubricating problems, an expert of the Erland Oil Company would spend from two days to three weeks at the prospective customer's plant making a detailed survey. His report, after being checked up at the home office, was then sent to the prospective customer. If the manufacturer decided to buy from the Erland Oil Company, the expert went to the plant after the delivery of the oil to aid in the first applications. If the manufacturer was a large buyer, that is, one whose annual purchases of lubricants were \$8,000 to \$10,000 or more, the expert returned about once a month to check up on performance. A customer obtained in this manner usually was retained by the company.

Practically all railroads, steamship companies, and large manufacturing companies bought lubricants on yearly contracts, as also did many smaller companies. The vice president in charge

of sales of the Erland Oil Company estimated that from 60% to 65% of sales of lubricants to the industrial market were made in this manner. Erland salesmen or experts called as frequently on contract buyers as on others, both to check the performance of the oils and to promote friendly relations with the customers.

Shortly after the World War, the Erland Oil Company's sales to a number of large users had begun to decrease. Some of the railroads, for instance, reduced their purchases in order to place more business with other oil companies which were shipping increased quantities of oil over their lines. Prices were not a consideration in these transactions because in general the prices of competing oil companies were about the same. During the succeeding years, this practice of trading, or reciprocity in purchase, became more and more common. Some oil companies had gone to the extreme of substituting several short hauls for one long haul to the ultimate destination in order to spread their patronage, and thereby be able to demand more patronage in return.

The vice president in charge of sales of the Erland Oil Company pointed out that many manufacturers also were practicing reciprocity. For instance, a company from which the Erland Oil Company had been making large purchases of equipment prior to 1919 had been buying from the Erland Oil Company about 80% of its requirements of lubricants, or about \$30,000 annually. After that time this manufacturer gradually reduced its purchases from the Erland Oil Company to about one-tenth of its total lubricant requirements; the Erland Oil Company was aware that this firm's reason for withdrawing its patronage was to satisfy the demands of other refineries to which it sold equipment. In response to the action of this manufacturer, the Erland Oil Company reduced its equipment purchases from the manufacturer to an amount about equal to the dollar volume of the oil sold to the manufacturer.

Although the Erland Oil Company was able to hold a large proportion of its lubricant business on the basis of reciprocity, the officers of the company deplored the seeming necessity for such a practice. Reciprocity practically closed to the company a great potential market which was held by competitors. The officers much preferred to sell on the merits of the company's products. They believed that many of the Erland lubricants were



superior to those of competitors benefiting from reciprocity. Although large industrial customers purchased oils upon specifications, and thereby in one sense did not neglect consideration of quality, the president of the Erland Oil Company pointed out that two oils showing the same chemical analysis were not necessarily of the same quality. Oil was like bread, he said, in that two samples of either might show the same chemical analysis yet might have important practical differences. In other words, reciprocity neglected certain qualitative differences and thereby, in the opinion of the officers of the Erland Oil Company, considerably narrowed the company's market.

COMMENTARY: The spread of reciprocity in purchasing in the oil industry, as set forth in this case, was a disconcerting result of excess producing capacity. In this instance reciprocity did not involve price differentials, as in the Herkimer Steel Company case;<sup>2</sup> hence it was not open to the criticisms which were stated in the commentary to that case. Nevertheless, when short hauls were substituted for long hauls, in order to attract the patronage of railroad companies, the effects were likely to be economically wasteful. Moreover, in so far as the practicing of reciprocity resulted in the purchase by users of lubricants of poorer quality than otherwise would have been bought, or in the use of lubricants less suited for particular purposes, the disadvantages to the users were analogous to those arising from buying reciprocally at price differentials.

This practice is an example of a type of competition which results in saddling an irritating and potentially wasteful practice on an industry, with little net advantage to buyers or sellers. If one oil company gained a temporary advantage through this practice, that gain was almost certain to be offset by losses elsewhere; for if the company induced purchases by one source on the grounds of reciprocity, it was almost certain to suffer a loss in sales to some previous customer who was impelled by threats of reprisals to purchase a portion of his supplies reciprocally from another oil company. Purchases were split up into smaller lots, but probably few, if any, oil companies increased their total sales by this means. An industry in which such a type of competition prevails obviously has not reached a high plane of marketing practice.

On the question as to how a particular company, such as the Erland Oil Company, could have surmounted the obstacles of reciprocity competition and have sold effectively on the basis of merit and per-

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<sup>2</sup> 3 H.B.R. 360.

formance, it is not possible to venture an opinion without definite evidence regarding the specific methods of constructive sales promotion already experimented with, the care with which the company had undertaken to define its market, and the basis for the exercise of brand discrimination by users.

April, 1928

M. T. C.

## ACE BRUSH COMPANY<sup>1</sup>

### MANUFACTURER—BRUSHES AND BROOMS

PRICING—*Special Discounts to Secure Distributors' Cooperation.* A company manufacturing brushes and brooms sold them to large industrial users directly and to small industrial users through supply firms, granting the same terms to all its distributors. To overcome the friction resulting from some distributors' objections to its direct selling, the company decided to grant an additional 10% discount and other special privileges to those distributors who would agree to concentrate on the company's line to the exclusion of competing lines.

(1923)

The Ace Brush Company manufactured a wide line of brushes and brooms; its sales volume in 1927 was about \$1,500,000. Considerably over half the sales were made to the industrial market either directly or through mill supply firms. The remainder of the sales were made to the consumer market through various wholesale and retail outlets. Prior to 1923 the company had sold on the same terms to any satisfactory mill supply firm that would carry Ace brushes. After 1923, however, the company began granting special privileges to mill supply firms which would promote sales of Ace products to the exclusion of competing lines.

The Ace Brush Company made over 1,000 different kinds and sizes of brushes. Its main lines were paint and varnish brushes; floor sweeping brushes and brooms; window and counter brushes; brushes for creameries and dairies; automobile and foundry brushes; wire wheel brushes for buffing, cutting, grinding, cleaning, and polishing; and various special brushes for large users. Prices of individual brushes ranged from 10 cents to \$15 on stock items and amounted to as much as \$250 on some special types. Of the brushes sold to the industrial market there were two classes; those to be used as tools in production, and those to be used for maintenance purposes. The two most important types of industrial firms buying the company's products for production purposes were automobile tire manufacturers and manufacturers in the various metal trades. In selling to this type of customer, sales-

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<sup>1</sup> Fictitious name.



men sometimes required a little technical knowledge regarding the use of the brushes. The chief buying motive of manufacturers buying brushes as tools was thought to be economy in use; promptness in delivery was relatively unimportant.

In 1922 the company was selling to 200 mill supply firms. Many of these mill supply firms complained of direct selling by the manufacturer. The Ace Brush Company wished to have amicable and mutually beneficial relationships with its distributors. Its attitude toward them and toward the question of direct selling is indicated by the following hypothetical dialogue written by an officer of the company, who sought to answer the more common complaints of the mill supply firms.

Mill Supply Firm: "You sell us and then sell our customers."

Manufacturer: "What can you expect if you don't *sell* my product to your customers when I know they can be sold our product?"

Distributor: "But you sell them at lower prices than I can afford to."

Manufacturer: "Not if I am wise, for except in a few cases my selling expense direct is probably at least as large as yours plus what it costs me to sell you."

Distributor: "That is fair enough but what are those few cases?"

Manufacturer: "The occasional extremely large industrial user who buys in very large quantities. If I do not sell him direct at a better price than you can, someone else will and you will not get the business anyhow."

Distributor: "But if all manufacturers would refuse to sell direct at lower prices that would fix matters."

Manufacturer: "Yes it would help you but it would not be economically sound in cases such as we are discussing, for my selling expense direct is less than what it would cost me to sell you plus your own sales expense."

Distributor: "Well perhaps you are right, but what I want is some real cooperation."

Manufacturer: "Fine, there are a number of things I'll be glad to do for you in the way of advertising support, selling helps for your men, protection on direct selling and from local competition. On the other hand, you must do your part with real consistent sales support instead of shopping around on a price basis. In other words, I'll be glad to look on you as my selling agency and help you build sales and profits if I can count on you to stick by me and really cooperate in selling my line to the exclusion of competitive lines."

The essence of the policy developed by the Ace Brush Company in 1923 is expressed in the last sentence of the dialogue. The company wanted each distributor to promote the sale of Ace brushes and not merely to catalogue the brushes, as was the usual practice. In return for the cooperation of those distributors who agreed to give special attention to Ace products, the company granted a price averaging 10% lower than that allowed other mill supply firms. Prices to the other supply firms were not increased in order to be able to offer this differential. The company also turned over to its distributors inquiries from manufacturers and gave them all manufacturers' accounts which could not economically be sold to directly. Generally, all accounts of \$1,000 a year and over could be advantageously handled directly; but the company would fill orders from some smaller manufacturing accounts, the decision depending upon the kind of brushes and the assortment of brushes desired and upon the attitude of the manufacturers.

The company made no exclusive agency agreements with distributors. It usually had only one or two preferred distributors in a city, but it continued to sell to other mill supply firms. In a few cases these other mill supply firms gradually discontinued handling Ace brushes. The regular distributors were required to drop other lines of competing brushes as soon as possible; generally, these firms had sold several brands of brushes, sometimes carrying considerable stock of each brand and sometimes carrying practically no stocks.

The preferred distributors were expected to carry sufficient kinds and quantities of Ace brushes in stock to meet local demands, which, of course, varied greatly in different territories. In many cases, the distributors' stocks of Ace brushes had to be increased greatly in order to supply adequately the local market. In other instances, mill supply firms already had been carrying good assortments of Ace brushes and did not have to increase their stocks to any great extent upon becoming special distributors.

In the main, the distributors did not lower their prices of Ace brushes upon receiving the special 10% discount. This price reduction was given as a compensation for additional selling effort, and, as the sales manager of the Ace Brush Company stated, the reduction, even in the eyes of the distributors, hardly justified any change in their prices.

The company put its new policy into effect gradually. Distributors were given the special discount only after careful investigation and only when the distributor agreement would be mutually beneficial. By 1928, the company had made special agreements with 40 of the 200 mill supply firms which handled its products. This policy was gradually being extended to additional distributing centers.

During the first four years in which the company undertook to secure special distributors its sales volume increased approximately 25% in those territories where the new policy had been put into effect. In some territories, results were extremely satisfactory. Within four years one distributor increased its annual sales from \$1,700 to \$7,250; another, from \$1,800 to \$4,200; a third, from \$5,000 to \$20,000. Another distributor in a three-year period increased its sales volume from \$1,500 to \$9,500.

Part of the increase in sales of distributors resulted from the fact that the Ace Brush Company turned over to them, when practicable, orders and inquiries from manufacturers. But the company attributed the increase primarily to the concentration of distributors on one line of brushes and to their greater selling efforts.

In spite of the fact that the company granted its special distributors a discount 10% greater than that previously allowed, it made a greater net profit than it had before. The reduction of price to preferred distributors was more than offset by the larger sales volume and by the lower cost of handling a smaller number of large orders as compared with a larger number of small orders.

**COMMENTARY:** The Ace Brush Company was working out successfully a solution for one of the most common problems in industrial marketing; namely, that of reconciling direct sales to large users with distribution through supply firms to small users. The company granted the selected distributors a sufficiently wide margin to induce them to carry adequate stocks and to cooperate in promoting sales by following up inquiries, for example, without attempting substitutions. The selected distributors, in turn, agreed to concentrate their stocks of brushes and their sales efforts on the Ace line.

The experience of the Ace Brush Company indicates that its product was better suited to selected distribution than to intensive distribution. Had this not been so, the granting of the extra discount to the selected distributors would not have produced the increased volume of sales that was attained.

April, 1928

M. T. C.



## NEW YORK HIDE AND SKIN EXCHANGE, INCORPORATED

### COMMODITY EXCHANGE—HIDES AND SKINS

PRICE STABILIZATION—*Organization of Hide and Skin Exchange.* When a hide and skin exchange was formed early in 1929, an acceptance corporation, many of whose customers were interested in the leather industry, reviewed the marketing situation to determine whether such an exchange was practicable. The exchange was to be utilized both for cash and futures transactions. Its sponsors anticipated that it would tend to stabilize prices of hides and skins and also would make it possible for tanners and others dealing in those commodities to protect themselves against loss from price fluctuations.

(1929)

Early in 1929 a hide and skin exchange was incorporated, to operate in New York City. The exchange, soon after its incorporation, announced its willingness to receive applications for membership. The Shays Company, a large acceptance corporation many of whose customers were interested in the leather industry, reviewed the marketing situation to determine whether such an exchange was practicable and should be given the company's support. Executives of the company recognized that stabilization of the hide and skin markets, such as sponsors of the exchange anticipated it would promote, was desirable. They also recognized it as desirable for tanners, hide importers, and other merchants dealing in hides to be able to relieve themselves, by hedging, of the risk of loss from price fluctuations. The question was whether such benefits could be brought about in the hide and leather trade through the medium of a commodity exchange organized for trading in futures.

In January, 1929, details regarding the operation of the exchange, such as contracts, commissions, and basis grade, had not been decided. Those details would be decided upon after membership in the exchange had been settled. The number of seats was limited to 250, to sell for \$2,500 each. Seats were to be divided among producers, dealers, importers, tanners, and commission houses. The trading unit tentatively proposed was

\$2,000 to \$3,000, which amounted to approximately a third of a carload of hides. Most buying of hides was said to be in carload lots, because of the relatively high freight rates for less than carload lots. It also was understood, although this was not definitely decided, that trading on the exchange, at first at least, would be limited to domestic packer cattle hides and South American packer cattle hides. It was estimated by one broker that the hides produced by six to twelve domestic packers in addition to the so-called Big Four and by three or four South American packers in addition to the Big Four would be eligible for listing on the exchange; it was anticipated, however, that a majority of the buying and selling transactions on the exchange would be in terms of hides taken off by the Big Four. Tentatively it was planned to exclude from the Exchange all hides produced by small packers and also country hides, as well as calf, goat, and sheep skins, because of the lack of standard classification and grading. Consideration was being given, however, to the possibility of including two types of country hides, i.e., Extremes and Buffs.

It was planned to select one type and grade of packer hides as the basis for futures trading on the exchange, but to provide that when delivery was called for, certain other types could be supplied with specified adjustments in prices. Price differentials relative to the basis grade would be established for all types and grades of hides listed on the exchange; these differentials, it was stated, would be revised at intervals of two to four weeks.

In connection with the exchange there would be a clearing association which would guarantee the fulfillment of contracts entered into on the exchange by members of the association. A buyer and seller would enter their contract with the clearing house on the day the transaction took place, at the same time depositing with the clearing house specified margins. As the price of the commodity dealt in advanced or declined during the period before the contract was liquidated, the seller or the buyer respectively would deposit additional sums to cover the amount of the price change. Each member of the clearing house further would be required to deposit \$10,000 with the clearing house as security for the performance of his contracts.

For the protection of persons trading on the exchange, maximum daily advances in prices of hides sold on the exchange were to be specified. The Board of Governors of the exchange also

would have the right to specify at any time the prices at which persons who had sold short could cover their transactions.

The New York Hide and Skin Exchange, Inc., issued several statements describing the probable operation of the exchange and its anticipated advantages to persons interested in the hide and leather markets. The following material is quoted from those statements.

December 26, 1928

It is not the function of the New York Hide and Skin Exchange, Inc., to take the place of the existing method for the purchase and sale of raw hides and skins. It does not suggest that the collector, the dealer, the broker or the manufacturer of raw hides and skins buy his raw material at the exchange. The dealer and importer will continue to cover his needs from the American Packer, Dealer and Collector and from other world hide and skin markets, and the manufacturer will continue to cover his needs through the importers, dealers, brokers, etc.

The primary fundamental function of the exchange is to provide the hide and skin trade, and the industry, protection against losses caused by changes in price of the raw material. Because of the rapid changes which take place in the price of hides and skins, and by reason of the fact that the raw material accounts for a large part of the cost of the finished product, a change in the price of hides and skins causes rapid and large differences in values. Without an exchange the buyer of the raw produce is faced with the danger of price declines beginning with the time the hide or skin is purchased until it is disposed of in the raw or the finished state, which latter very often takes six to nine months, and during which interval the price of raw hides and skins can vary as much as 30%. At times even greater differences have been known to take place in this length of time. To protect himself against such price declines the buyer can "hedge" his position by the sale of "futures" on the exchange, equal in quantity to the actual raw material purchased. For example, John Smith has purchased 5,000 light native big packer cowhides for delivery in February at 18 cents per pound, and let us also suppose that February hides sell on the exchange at  $17\frac{7}{8}$  cents per pound. Mr. Smith would then sell 5,000 February hides on the exchange at  $17\frac{7}{8}$  cents. If the price of light native packer cowhides should in the meantime decline to  $16\frac{1}{2}$  cents per pound, this would cause a loss of about  $1\frac{1}{2}$  cents per pound, equivalent to approximately \$3,750 on his purchase of physical raw hides. However, the price of February contracts on the exchange has also declined to  $16\frac{3}{8}$  cents per pound which would establish for Mr. Smith a profit of approximately \$3,750 on his futures hides. Consequently, the loss on the actual raw hides is balanced by the profit on the futures and in this manner Smith has been able to secure price insurance.



The New York Hide and Skin Exchange, Inc., offers to importers, local dealers and manufacturers different advantages and the following will illustrate some of its benefits:

The Spruce Hide Corporation import Argentine hides. Their Buenos Aires branch make regular consignments of hides and skins to their New York branch. If any part of such shipments are sold ahead, there is no need of hedging any part of same, but should there be part of the shipments unsold, the risk of the market is unprotected. The Spruce Hide Corporation, therefore, will sell on the exchange, futures equal in the amount to the unsold part of the above referred to shipment. As the actual hides are disposed of, these hedges are liquidated. In this manner the importer is enabled to eliminate the risk of market fluctuations and carry on the business as importer on the basis of cost plus a normal profit. In similar manner the importer can use the exchange in selling actual raw hides and skins prior to his having actually purchased them, and by buying a future contract on the exchange equal in quantity to the actual raw hides and skins sold, the seller has eliminated the market risk. As soon as the importer has purchased actual hides he will immediately sell his futures purchased on the exchange.

As to the domestic hide dealer, he can use the exchange to hedge in a similar way, as above described, his long or short positions of the actual commodity.

The manufacturer of raw hides and skins can make excellent use of the exchange by hedging the material which is the principal part of his manufactured product, viz. the raw hide or skin, and he can do so from the time the raw material is purchased until such a time as it is actually manufactured and sold to his trade. If the price of the raw hide or skin drops considerably before he has produced the finished product, the price of his manufactured article will have declined similarly, and the manufacturer necessarily has to dispose of the finished product at a loss. If, however, he uses the exchange by hedging, he can do so by a sale of futures on the exchange in a quantity equal to the amount of raw hides and skins on hand or contracted for, so that the loss he may have on his finished inventory because of a market decline will in a great measure be recouped by the profit he will make on his futures hide and skin contracts.

The manufacturer also can make use of the exchange by assuring himself of an actual cost basis for his raw material long before he can buy the actual hides and in this manner he can assure himself months ahead of the cost of his finished product and is much better enabled to merchandise his manufactured product.

Assume that Spruce Hide Corporation or the New York Tanning Corporation are carrying in stock an unusually great amount of hides or skins in anticipation of favorable business. General conditions suddenly change for the worse; future hide or leather business is uncertain. The exchange makes it possible to hedge an inventory loss and the Spruce Hide Corporation or the New York Tanning Corporation

would sell whatever part of the inventory they decided was a surplus under these changed conditions. Should the outlook later on improve, the exchange "sale" could immediately be covered. This might result in a slight loss should the market have advanced in the meantime, but this is preferable rather than have to risk a rapid and perpendicular break in raw material bringing with it a drastic reduction in inventory values. On the other hand, if the anticipated decline does take place and an inventory loss has to be absorbed, the hedger has a corresponding offsetting profit on his hedged futures exchange sale.

An additional decided advantage in exchange operation is the availability of an immediate market at all times. In the past, producers, dealers, manufacturers, etc., have been able to dispose of their surplus raw material only at a great sacrifice and often only with delay. Without an exchange any trade is limited to its own industry, whereas an exchange creates a larger buying and selling element resulting in an instant market at fractional or graduated price levels, thus permitting a gradual liquidation of surplus without causing undue and harmful trade disturbances.

The conclusion is that the exchange will largely eliminate the speculative risks of producers and enable the manufacturer to do his business at cost, plus a legitimate manufacturing profit.

January 11, 1929

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The object of permitting the seller to deliver any one of a number of specified grades and to make his delivery at any time during the delivery month is to prevent the possibility of corners and squeezes and to enable the seller to liquidate his position as readily and easily as possible. In the determination of the grades which it is optional for the seller to tender against exchange contracts, the exchange selects those particular grades which are the most extensively dealt in and most representative of the commodity.

From the foregoing it is evident that the contract makes stocks of the commodity of the deliverable grades liquid, in that they may be bought or sold at any time. In other words, as stated above, if the purchaser or seller concludes not to make delivery or take delivery, he can offset his purchase or sale contract by a corresponding sale or purchase contract. Furthermore, a ready market is always at hand, because the market is not restricted to producers, dealers and manufacturers, but has the outside public participation, thereby giving to the market a breadth and a flexibility which is characteristic only of organized futures exchanges. It enables the dealer and the manufacturer to buy or sell at a moment's notice.

At the present time in the hide and skin industry, when information of a bearish nature is current, the entire trade will become bearish and will all turn sellers. Likewise, when information of a bullish nature appears, dealers and manufacturers will rush to buy. This brings about sharp price movements and severe losses to the industry. With the establishment of an exchange, the market is broadened by reason



of the participation by the outside public. The result is that at all times the producer, dealer, and manufacturer will be able to make immediate sales or purchases, and counterbalancing purchases and sales by the outside public will act as a brake against sharp price rises and declines.

A tanner who carries his stocks of raw material from sixty days to six months before they are made up into leather, may secure himself against loss by reason of a fall in the price of raw material by selling on the exchange, for delivery several months hence, future contracts equivalent to the raw material which enters into the manufacture of the leather. If a fall in the price of the raw material develops, the profit on his exchange transaction will compensate him for the lower price at which he will be compelled to sell his leather. If, on the other hand, the price should move up, the loss on his exchange sale is offset by the increased selling price of his leather.

The dealer can likewise obtain protection by using the exchange. One of the many types of how this protection is obtainable is as follows: Let us assume that the dealer purchases stocks of the commodity for future sale. Every day that he has the commodity on hand he is bearing the risk of an adverse price change—a decline. With an organized exchange, as soon as he acquires a stock of the commodity, he may sell contracts for future delivery of an equivalent amount on the exchange, instead of dumping the raw material on the market, as is now the prevailing custom in the case of a severe decline, thereby further depressing the price.

Another example of the utility of the exchange is found in the service which it renders the importer of the raw material. The importer is able to accept offers from abroad at any time without apprehension as to the future course of prices, for, simultaneously with accepting the offer from abroad, he may sell contracts on the exchange for the future delivery of an equivalent amount. If the price declines, he is thus insured against loss. If the price advances, his gain on inventory will be offset by his future trade, but he will make his merchandising profit. He foregoes large gains for the sake of escaping drastic losses.

New York Hide and Skin Exchange, Inc., has been organized to serve not only packers, producers, dealers and tanners in the United States and Canada, but the entire industry throughout the world. Its members will be composed of producers, dealers, tanners and commission houses who are actively engaged in or connected with the buying, selling or consumption of hides and skins. Its regular membership is limited to 250, and the subscription price for a membership is \$2,500.

Although the exchange was organized only two weeks ago, appreciation of its potential usefulness is evidenced by the fact that already over 150 applications for seats have been submitted. The exchange has made no endeavor to solicit memberships. Applications for seats will be considered by the Board of Governors so as to allocate the membership in the most representative manner as between the



trade and the commission houses whose clientele will be actively interested in its operations.

As soon as the memberships are allocated, committees will be appointed to determine the grades to be made tenderable on the futures contracts, and to draft by-laws and rules to provide the official warehousing of hides and skins and an efficient system of delivery. By-laws and rules will also be drafted providing for the commission rates and the trading rules. The committees appointed to draft these by-laws and rules will be made up of men from the hides and skin industry, well known for their technical experience in connection with hides and skins, and from representatives of commission houses versed in the technique of commodity exchange operation, and assisted by the advice and guidance of expert exchange technicians.

The vice president of the Shays Company stated that since 1920, with the exception of one or two years, the leather business had been unprofitable for most tanners. During the World War, with the curtailment of foreign supplies and the increased demand for leather, prices of hides and leather advanced to an unprecedented peak. Then, after the close of the war, prices fell sharply. Prices of hides, the vice president stated, in a few months fell from 63 cents a pound to 6 cents a pound. During the period of rising prices much buying of hides was done on a speculative basis, rather than merely to satisfy merchandising requirements, so that when the sudden fall in prices occurred dealers and tanners found themselves with large inventories on which they were forced to take heavy losses. The stocks of leather thus accumulated were not completely liquidated, it was said, for some years.<sup>1</sup>

The heavy losses experienced by tanners following the war did not have the effect of forcing an appreciable number of tanners

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<sup>1</sup> "During 1926 and the early part of 1927 tanners in the United States and Europe reduced their production of leather and filled orders, as far as possible, from stocks on hand. In this manner the accumulation of stocks was gradually reduced so that in August, 1926, the American and European tanners had only about six weeks' supply on hand. Therefore, in the spring of 1927 it was found necessary to obtain large quantities of raw hides and skins, prices for which rose rapidly up to August of the same year. Owing to a seasonal quietness which occurred at this time there was a slight break in the raw-hide market but this only lasted for a short period. Prices of these raw materials again rose and this increase has continued up to the present time (January 15, 1928). This represented the most rapid increase in raw-hide and skin prices during normal years. Despite the higher prices for raw hides and skins larger supplies were not available, as these are by-products, the increased production of which depends primarily on a larger consumption of meat."

*American Leather in Foreign Markets*, United States Department of Commerce, Trade Information Bulletin, No. 546, p. 2.

out of the business, although some tanners scrapped part of their plants. Most tanning companies, the vice president stated, were closely held; had there been a large number of stockholders, liquidation probably would have taken place in many instances, and the condition of excess production facilities would have passed.

Speculative buying of hides, in the vice president's opinion, had not ceased after the drastic price declines of 1920 and 1921. Purchasers tended to buy on a rising market and to cease buying when prices were falling. This practice accentuated price fluctuations and tended to keep prices either abnormally high or abnormally low. Exhibit 1 shows prices of hides and leather on specified dates, from January, 1925, to January, 1929.

The two chief types of leather produced by tanning companies were sole leather and upper leather. The sole leather business, because of the large investment which it necessitated as a result of the length of time required for the tanning processes, was in the hands of a relatively few companies. Upper leather, on the other hand, was produced by a large number of tanners. From three to six months was required for tanning sole leather, whereas upper leather required but two to eight weeks.

Cattle hides produced in the United States were classed as packer hides or as country hides. Packer hides were those taken off at packing plants, and country hides were those taken off by farmers or local butchers. Packer hides were further distinguished according to whether they were taken off by the four big packers or by smaller packers. Persons interested in promoting the New York Hide and Skin Exchange, Inc., estimated that there were in the United States 25 to 30 small packers who offered hides comparable in quality, and in the care with which they were selected and graded, to the hides sold by the big packers. Country hides, on the other hand, seldom were taken off by experts and usually were much inferior to packer hides. All cattle slaughtered for interstate trade, which included those slaughtered by the big packers and by some of the small packers, were subject to federal inspection. Of a total of 14,705,986 head of grown cattle slaughtered in the United States in 1925, 9,853,039 were killed under federal inspection; these figures indicate roughly the proportions in which packer hides and country hides were produced.<sup>2</sup> The

<sup>2</sup> United States Department of Commerce, *Hides and Skins, World Production and International Trade*, Trade Promotion Series No. 50, pp. 40-44.

EXHIBIT I\*  
 PRICES OF HIDE AND LEATHER, IN CENTS PER POUND, FOR SPECIFIED DATES FROM JANUARY 10, 1925 TO  
 JANUARY 12, 1929

Hides	Jan. 10, 1925	Jan. 17, 1925	Jan. 24, 1925	Jan. 31, 1925	Feb. 7, 1925	Feb. 14, 1925	Feb. 21, 1925	Feb. 28, 1925
Packer No. 1, native.....	16 <sup>3</sup> / <sub>4</sub>	17	17	16 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>
No. 1 Texas.....	15 <sup>1</sup> / <sub>2</sub>	16	16	16 <sup>1</sup> / <sub>2</sub>	16	16	16	15 <sup>1</sup> / <sub>2</sub>
Colorados.....	14 <sup>1</sup> / <sub>2</sub>	15	15	15 <sup>1</sup> / <sub>2</sub>	15	15	15	14
Cows, heavy native.....	15 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	14 <sup>3</sup> / <sub>4</sub>	14 <sup>1</sup> / <sub>2</sub>	14 <sup>1</sup> / <sub>2</sub>	14 <sup>1</sup> / <sub>2</sub>	13 <sup>1</sup> / <sub>2</sub>
Branded Cows.....	12 <sup>1</sup> / <sub>2</sub>	13 <sup>1</sup> / <sub>2</sub>	13 <sup>1</sup> / <sub>2</sub>	13 <sup>3</sup> / <sub>4</sub>	13 <sup>3</sup> / <sub>4</sub>	13 <sup>3</sup> / <sub>4</sub>	13 <sup>3</sup> / <sub>4</sub>	13 <sup>1</sup> / <sub>2</sub>
No. 1 Buff Hides.....	12 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	13	13	12 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>
No. 1 Extremes.....	13	13	13	15	14 <sup>1</sup> / <sub>2</sub>	14 <sup>1</sup> / <sub>4</sub>	14	13 <sup>3</sup> / <sub>4</sub>
No. 1 Kip.....	15	16	15 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	15	15	15
No. 1. Calfskins.....	17 <sup>1</sup> / <sub>2</sub>	18	19	19	18	17 <sup>1</sup> / <sub>2</sub>	17 <sup>1</sup> / <sub>2</sub>	17 <sup>1</sup> / <sub>2</sub>
Chicago City Calfskins.....	25	25	25	25	25	25	25	25
Leather								
Union Backs.....	42	42	44	45	45	45	45	45
Scoured Oak Backs, No. 1.....	50	50	52	52	52	52	52	52
Belting Butts, No. 1, light.....	61	61	63	63	63	63	63	63

\* Taken from "Wholesale Quotations of Commodities," *Dun's Review*.



EXHIBIT 1 (Continued)

Hides	Mar. 7, 1925	Mar. 14, 1925	Mar. 21, 1925	Mar. 28, 1925	Apr. 4, 1925	May 2, 1925	June 6, 1925	July 4, 1925
Packer No. 1, native.....	15	14 1/2	14	14	14	14 1/4	14 1/2	16
No. 1 Texas.....	14 1/2	14	14	14	14	14 1/4	14 1/2	14 1/2
Colorados.....	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2
Cows, heavy native.....	13 1/4	13 1/4	13	13	13	13	13	14
Branded Cows.....	13 1/4	13 1/4	13	13	13	13	13	13 1/2
No. 1 Buff Hides.....	12 1/2	12	11 1/2	11 1/2	11 1/2	11 1/2	11 1/2	12
No. 1 Extremes.....	13 1/2	13 1/2	13	12 1/2	13	13 1/2	13 1/2	15
No. 1 Kip.....	14	14	14	14	13	13	13	15
No. 1 Calfskins.....	16	16	16	15	14	16	16	17 1/2
Chicago City Calfskins.....	23	23	23	20	20	20	20 3/4	22 1/2
Leather								
Union Backs.....	45	45	45	45	45	45	45	45
Scoured Oak Backs, No. 1.....	52	52	52	52	52	51	51	51
Belting Butts, No. 1, light.....	63	63	63	62	62	62	62	62

EXHIBIT I (Continued)

Hides	Aug. 8, 1925	Sept. 5, 1925	Oct. 3, 1925	Nov. 7, 1925	Dec. 5, 1925	Jan. 9, 1926	Jan. 16, 1926	Jan. 23, 1926
Packer No. 1, native.....	17½	17½	17½	16½	16	15¼	15¼	15
No. 1 Texas.....	15½	16	16	15½	15	15	15	15
Colorados.....	14½	15	15	14½	14	14	14	14
Cows, heavy native.....	16½	17½	17½	16½	15	13½	13½	13½
Branded Cows.....	14½	14½	13	12¾	12¾	12	12¾	12¾
No. 1 Buff Hides.....	13	12½	12½	12½	12	11¾	12	11¾
No. 1 Extremes.....	16	15	14¾	14¾	14	14½	14½	14
No. 1 Kip.....	15½	15½	15½	15½	15	14	14	14
No. 1 Calfskins.....	17½	16	16	16½	16	15	16	16
Chicago City Calfskins.....	22½	20½	21	21	20	20¼	20¼	21
Leather								
Union Backs.....	43	43	43	43	43	43	43	43
Scoured Oak Backs, No. 1.....	50	50	50	50	50	50	50	50
Belted Butts, No. 1, light.....	61	61	61	61	61	61	61	61

## EXHIBIT I (Continued)

Hides	Jan. 30, 1926	Feb. 6, 1926	Feb. 13, 1926	Feb. 20, 1926	Feb. 27, 1926	Mar. 6, 1926	Mar. 13, 1926	Mar. 20, 1926
Packer No. 1, native.....	14	13½	12½	12½	13	12½	12½	12
No. 1 Texas.....	14	13	12	12	12	12	12	12
Colorados.....	13½	12½	11½	11½	11½	11½	11½	11½
Cows, heavy native.....	12	11	10½	11	11	11	11	10½
Branded Cows.....	12	11½	10½	10½	10½	10½	10½	10½
No. 1 Buff Hides.....	11	10½	10½	9½	9½	10	10	10
No. 1 Extremes.....	13	12½	12½	12	12	12	12	12
No. 1 Kip.....	13½	13½	13½	12½	12½	12½	12½	12½
No. 1 Calfskins.....	15	15	15	12	14½	14½	13½	13
Chicago City Calfskins.....	21½	21	20	18	18	18	17	17
Leather								
Union Backs.....	43	42	42	42	42	42	42	41
Scoured Oak Backs, No. 1.....	50	50	50	50	50	50	50	50
Belting Butts, No. 1, light.....	61	61	61	60	60	60	60	60



## HARVARD BUSINESS REPORTS

EXHIBIT I (Continued)

Hides	Mar. 27, 1926	Apr. 3, 1926	May 1, 1926	June 5, 1926	July 3, 1926	Aug. 7, 1926	Sept. 4, 1926	Oct. 2, 1926
Packer No. 1, native.....	12	11½	12½	14	13	15	15	16
No. 1 Texas.....	12	11½	11½	13	12	14	14	14½
Colorado.....	11½	11	11	12½	11½	13½	13½	14
Cows, heavy native.....	10½	10½	11	12½	12	14	14½	14½
Branded Cows.....	10½	10	11	12½	11½	13½	13½	13½
No. 1 Buff Hides.....	10	9¼	10	10½	10	10½	10½	11
No. 1 Extremes.....	12	11½	12½	13½	13	14	14	14½
No. 1 Kip.....	12	12	12½	14	13	15	13½	13½
No. 1 Calfskins.....	13	13	13½	15	14	15½	14	14
Chicago City Calfskins.....	16½	16½	17	17½	17	18½	18	18
Leather								
Union Backs.....	41	40	38	38	38	41	41	42
Scoured Oak Backs, No. 1.....	50	48	43	43	43	45	45	45
Belting Butts, No. 1, light.....	60	59	58	58	58	55	55	56



EXHIBIT I (Continued)

Hides	Aug. 13, 1927	Sept. 10, 1927	Oct. 8, 1927	Nov. 12, 1927	Dec. 17, 1927	Jan. 7, 1928	Jan. 14, 1928	Jan. 5, 1929	Jan. 12, 1929
Packer No. 1, native.....	20	22	22½	24	25	25½	26½	22½	21
No. 1 Texas.....	18½	21	21½	22½	24½	25	26	20½	19½
Colorados.....	18	20½	21	22	24	24½	25½	19½	18½
Cows, heavy native.....	19	21½	21½	22	22½	24	25½	21	18
Branded Cows.....	18	20½	20½	21	22	23½	24	18	17
No. 1 Buff Hides.....	18	19	19	18½	20½	21½	22½	15¼	14½
No. 1 Extremes.....	20	22	21	21	22	23½	25	17	16½
No. 1 Kip.....	16	17	18	20	20	21½	24	17	16½
No. 1 Calfskins.....	16	16½	18	20	20½	23	25	18	18
Chicago City Calfskins.....	21	21	22	24	26	29	30	25	24
Leather									
Union Backs.....	50	50	53	54	58	58	62	58	58
Scoured Oak Backs, No. 1.....	54	54	57	58	62	62	64	60	60
Belting Butts, No. 1, light.....	62	62	62	62	62	75	79	74	74



following quotations from a report prepared by the United States Department of Commerce indicate the differences between packer hides and country hides.<sup>3</sup>

*Cattle hides.*—The United States has more cattle than any other country in the Western Hemisphere, and according to the Department of Agriculture there were almost 60,000,000 head of these animals in this country in January, 1926. The total slaughter of grown cattle during 1925 amounted to 14,705,986 head, of which amount 9,853,039 animals were killed under Federal inspection. Hides are well taken off in the packing plants and large slaughterhouses, being seldom damaged by knife cuts. In the smaller slaughterhouses and on the farms the hides produced are frequently damaged during the process of take-off, but propaganda by the Government and private enterprises is doing much to improve the country take-off. Practically all of the packer hides produced are cured by wet salting, while country hides are cured by dry salting and wet salting, with only negligible quantities being cured by drying. The following comparison [page 346] of methods of take-off, preparation, and sale of country hides and skins with the hides and skins produced by packers will be of general interest:<sup>4</sup>

All packer hides are generally sold directly [brokers often are used] to tanners by the producers. The prices of these hides are quoted in the weekly and daily trade papers, which the trade follows very carefully. Generally the farmers or other small producers can not sell hides directly to the tanneries because tanners prefer carload lots, all of which must be as near the same grade and size as possible. Therefore they dispose of their supply to a local buyer, who in turn sells to a traveling dealer. These traveling hide dealers generally sell either directly to tanners or to brokers. Because of the number of hands through which a country hide or skin must pass before it is finally purchased by the tanner, special care is needed in the curing of these skins so that they will not spoil before reaching their ultimate destination.

The primary distinction of the grades of cattle hides in the United States is into packer and country hides, and the next division is, in the case of the former, into steers, cows, bulls, and kips. The first of these are further distinguished as native, Colorado, and Texas, these being distinctions of breed. The native steers are of British stock, and the others, which are largely range cattle, are basically of Spanish origin, originally from Mexico, although now greatly mixed. Texas hides are small, thick, and plump and therefore favored for sole and belting leathers. Colorados are spready and less plump. These two classes bring lower prices than the "native" stock, due largely

<sup>3</sup> Ibid., pp. 40-44.

<sup>4</sup> Extract from *Farmers' Bulletin* No. 1055, United States Department of Agriculture.

Items	Country Hides and Skins	Packer Hides and Skins
Skinning (flaying).....	By unskilled men.....	By experts.
Cuts and sores.....	Numerous.....	Few.
Patterns and trim.....	Not uniform.....	Uniform.
Sinews.....	Left on hides.....	Removed.
Udders.....	Parts left on hide.....	“
Tail bones.....	Left on hide.....	“
Dewclaws.....	Many.....	Few.
Hair slips (putrid condition).....	“	“
Destroyed grain (rubbed or dragged hides).....	Often finely ground and dirty.....	Clean, coarsely ground, or rock salt.
Salt stains (due to unclean salt, etc.).....	Many not thoroughly cured.....	Generally well cured.
Salt.....	Often pickle cured.....	Always salt cured.
Cure.....	Usually two or more.....	Usually but once.
Method of cure.....	By vatting, by applying foreign substances or water.....	Rare.
Saltings.....	Careless.....	Careful.
False weighting.....	Dirty.....	Usually bright.
Handling.....	Low and uncertain.....	High and reliable.
Color of flesh side.....	Many sunburned and decayed.....	None.
Leather yield.....	Frequent in winter.....	“
Dried hides.....	Many.....	Few.
Frozen.....	“	“
Fallen.....	With more than 1 grub, graded as No. 2.....	With more than 4 grubs, graded as No. 2.
Glue hides.....	Small lots, often single hides.....	In carload lots of selection desired.
Grubs.....	Complex, through many dealers.....	Simple, producer to tanner.
Quantities.....	Frequently sold flat—i.e., not selected or graded.....	Always selected and graded.
Marketing.....	Not standardized.....	Long-established standards.
Producer's method of sale.....		
Standardization of classes and grades.....		

to the branding and not to breeding. Steers are divided into weights—heavies being 60 pounds and up, lights 50 to 60 pounds, and extremes 25 to 50 pounds. Native cows are distinguished as heavy, 55 pounds and up, and light, 25 to 50 pounds. Kips are classed as regular, 15 to 25 pounds, and over-weight above 25 pounds.

Packer hides were well standardized. They could be obtained in large, uniform lots graded as firsts or seconds. During the World War, the War Industries Board, in fixing maximum prices for hides and skins, listed the following classes of packer cattle hides: heavy native steers; heavy native spready; light native steers; extreme light native steers; heavy butt branded steers; light butt branded steers; heavy Colorado steers; light Colorado steers; heavy Texas steers; light Texas steers; extreme light Texas steers; branded cows; heavy native cows; light native cows; native bulls; branded bulls. These were well recognized classes and their prices customarily observed a fairly constant differential.

In setting maximum prices for country hides, the War Industries Board recognized nine geographical divisions in the United States, each of which, because of differences in the hides taken off there, required a different classification and price schedule. The country hides were not standardized and, except in a few small areas, no selection was made by grades. A buyer, in purchasing a lot of “country bull hides, 60 pounds and up,” for example, could not expect any more than a very rough uniformity between the individual hides in that lot or between the hides in that lot and in the last lot of country bulls he had purchased.

Prices obtained for country hides were much lower than prices for packer hides. Fluctuations in prices of country hides followed those for packer hides. On a falling market the declines in prices of country hides tended to be proportionately greater, since at such a time buyers were more particular in their selections. Prices in cents per pound of packer heavy native steer hides and of country heavy steer hides, for example, were as follows during 1928:<sup>5</sup>

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<sup>5</sup> *Hide and Leather*, December 29, 1928, p. 44.



	Packer Hides	Country Hides
January.....	27.56	21.94
February.....	26.00	20.50
March.....	25.50	20.55
April.....	27.75	22.56
May.....	27.25	21.75
June.....	24.90	19.30
July.....	26.25	19.87
August.....	25.25	18.00
September.....	25.90	18.00
October.....	24.00	15.87
November.....	23.94	16.31
December.....	24.25	16.80

In addition to domestic cattle hides, United States tanners used large quantities of imported hides. It was estimated that in normal times imports constituted 30% to 40% of the total used.<sup>6</sup> By far the largest imports of cattle hides were from South America. Of 150,451,522 pounds of cattle hides imported into the United States in 1926, 93,039,686 pounds originated in South America.<sup>7</sup> In Argentina, which was estimated to have more than 36% of the total cattle in South America, cattle hides were obtained from 4 sources: frigorificos, saladeros, public matoderos, and small country butchers. The frigorifico hides corresponded to those taken off by the big packers in the United States. They were expertly taken off and were carefully graded. The number of saladero hides was negligible compared with the number of frigorificos. The saladero hides on the whole were inferior to the frigorifico hides, and were sold in packs without selection by grade. Large numbers of hides were taken off by public matoderos and country butchers. These hides as a rule were subject to

<sup>6</sup> "Net imports of cattle hides amounted to nearly 30% of the total consumed in this country during the past three years (1925-1927). The percentage of calf and kip skins imported in relation to total consumption is slightly higher, and averages from 35% to 40%. Of the total goat and kid skins used yearly in the United States, more than 99½% are of foreign origin owing to the limited production in this country. More than 50% of the total sheep and lamb skins consumed by domestic tanners are of foreign origin. Practically all of the deer, elk, kangaroo, wallaby and seal skins tanned in this country are of imported material."

*American Leather in Foreign Markets*, United States Department of Commerce, p. 3.  
<sup>7</sup> United States Department of Commerce, *Hides and Skins*, Trade Promotion Series No. 50, p. 45.

cuts and sores and in general corresponded to the country hides in the United States.

In Brazil, which was estimated to have 33½% of the total cattle in South America, conditions were similar. Hides were taken off by packers, by smaller slaughterhouses, and by individual producers. The packer hides were carefully taken off and were standardized and graded, whereas the other hides often were improperly treated and were not uniform.

Calfskins were even less well standardized than cattle hides. This resulted chiefly from the fact that the packer takeoff was proportionally much smaller for calfskins than for cattle hides. The Department of Commerce report made the following statements with reference to calfskins.<sup>8</sup>

*Calfskins.*—Despite a fairly large production of calfskins, the local yearly production of these skins in the United States is not sufficient to supply the local needs and considerable quantities are imported annually. The slaughter of calves in the United States during 1925 amounted to about 10,099,195 head, of which 5,352,561 were killed under Federal inspection. Practically all of the calfskins produced in the United States are cured by green salting. The sale of packer calfskins is accomplished in the same manner as described for cattle hides, and the sale of country skins in the same manner as country cattle hides.

In the United States calfskins are generally divided into the following three classes: Cities, packers, and countries. The first of these classes is from the northeastern States and amounts to about 25% of the total calfskins produced in the United States. Packer calfskins amount to only about 20% of the total take-off. Country calfskins are available in the largest numbers and represent about 55% of the total supply. The city calfskins are divided into light, medium, and heavy, and run from five to seven pounds, seven to nine pounds, and nine to ten pounds, respectively. Packer calfskins are not divided according to weight, and country skins only occasionally. For shipment, calfskins are generally packed in bundles containing five skins each. Packer skins and heavy country skins are sold by the pound and other skins usually by the piece.

Goatskins used in the United States were very largely imported. Importations of lamb and sheep skins also were large. An importer of hides and skins stated that in general there was

<sup>8</sup> United States Department of Commerce, *Hides and Skins*, Trade Promotion Series No. 50, p. 45.

little standardization or grading of either goat or sheep and lamb skins.

Hides, it was stated, could be kept in cold storage for a long period without serious deterioration. In cold weather they could be kept for six or seven months outside of cold storage. In warm weather they could not be kept more than sixty days in an ordinary warehouse, although in packers' warehouses they could be kept longer than this.

One large hide and leather broker who was deliberating as to whether he should apply for a seat on the exchange stated that in his opinion it would be difficult for persons not definitely affiliated with the hide and leather industry to trade on the exchange, because of the extreme difficulty involved in forecasting production and market trends. The fact that hides were a by-product, the supply of which was determined by the demand for meat, rather than by the demand for the hides themselves, made market forecasting more difficult for hides, in this broker's opinion, than for other commodities, such as wheat and cotton, in which futures trading was common. The United States Government, as well as various private agencies, issued market information on hides and leather. Several publishers distributed to subscribers daily reports on hide sales, offerings, and prices. No official forecasts of production were made, however, as in the case of cotton, for example. The available market information was summarized in a letter by Wilbur J. Page, Chief of the Hide and Leather Division of the Bureau of Foreign and Domestic Commerce:

The Government, through its various agencies and departments, issues numerous reports and pamphlets of vital interest to hide and skin dealers, tanners, and leather dealers. The United States Department of Agriculture issues monthly and yearly data on the slaughter of animals in inspected establishments, information regarding the better take-off, grading and curing of all types of hides and skins, as well as various formulas for the eradication of ticks and other pests injurious to hides of all kinds.

The Bureau of Census issues monthly and yearly statements showing the production of various types of leather, consumption of hides and skins, stocks of leather in the hands of tanners and consumption of leather.

The Hide and Leather Division of the Bureau of Foreign and Domestic Commerce, obtains hides, skins, and leather quotations from all parts of the world and releases these to the trade press, and through its weekly bulletin, which is sent to all interested



American firms. Quotations on the domestic markets are not given because these are fully covered by the local trade press. This Division also occasionally compiles trade information bulletins regarding the foreign markets for American leather and has also released a special agent's series entitled "Hides and Skins: World Production and International Trade."

The fact that tanners and importers of hides, as well as dealers in many instances, faced a long period between the purchase of the hides and their resale, either in the same form or as leather, was cited by the vice president of the Shays Company as constituting a strong reason for the establishment of an organized speculative market. Importers from South America, it was stated, had to allow a minimum period of 60 days between purchase of hides and their receipt in New York City. Tanners, except in periods when the demand was substantially greater than the supply, often had to place orders two or three months prior to delivery. They also had to maintain reasonable stocks of hides; and the tanning process itself, in the case of sole leather, required three to six months. The fact that the raw hides constituted a large part of the value of the finished leather, so that hide and leather prices tended to move together, was looked upon as a factor favoring success of the exchange.

Among the factors that might jeopardize the success of the exchange were the lack of standard classifications and grades for a large portion of hides and skins produced, the difficulty of forecasting production and market trends, and the undue influence that a few packers might be able to exert because of their position as major sources of supply. According to a report made by the Federal Trade Commission in 1919, the so-called big packers, of which there then were five, normally killed 70% of the live stock slaughtered by all packers and butchers engaged in interstate commerce. Companies doing interstate business, it was stated, handled about 63.4% of the meat consumed in the country, excluding home slaughter. The big packers asserted that they did not handle over 40% of the total meat production of the United States.<sup>9</sup> An officer of one large company making sole leather also stated that the usefulness of the Exchange to tanners would be limited by the fact that shoe manufacturers commonly canceled

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<sup>9</sup> *Report of the Federal Trade Commission on the Meat Packing Industry, Summary and Part 1, June 24, 1919.*

orders for leather if prices declined before the orders were filled; this tanning company made 99% of its sales upon orders placed not more than 60 days in advance.

COMMENTARY: The first requisite for a futures market is a dependable system of grading, so that the grades of material eligible for delivery on the basis contract can be defined in accordance with generally accepted specifications. Confining the trading in hide futures to packer hides of specified grades will meet this requirement reasonably well in this case.

The next requisite is that the bulk of the supply of the material traded in be in relatively few grades, between which fairly constant price differentials exist. A basis contract which permits delivery at seller's option of various grades at stipulated price differentials is essential for organized speculation, in order to provide a broad market and to guard against manipulation and corners. For there to be assurance of the maintenance of fairly constant price differentials between grades, it is essential that the grades to a large measure be interchangeable in use; otherwise an unusual increase in the demand for a particular finished product, made ordinarily of one of the grades, will disrupt seriously the existing differentials between the prices of that grade and other grades. Interchangeability in use between the various types of hides, unlike that between different grades of wheat or cotton, is not sufficient to make it likely that this condition can be satisfactorily met in the hide trade.

The utility of a futures market for hedging by merchants is dependent upon close correlation in the prices of spots and futures. If the prices of spot hides and hide futures do not move together, the importer or other merchant who attempts to hedge will not secure the anticipated protection. In this connection the fact that the bulk of the supply of hides available for delivery on futures contracts will come from the four large packing companies is particularly significant. Whatever their attitude toward the Exchange may be, the large packers will have it in their power to manipulate the futures prices by regulating the supply released for delivery on Exchange contracts. Even though they refrain from intentional manipulation of the futures prices, any changes in their sales policies for hides will have unforeseen effects on hide futures contracts. The mere possibility of such influence being exerted in itself will lessen seriously the dependability of the hide futures market.

The correlation between hide spots and hide futures that is necessary for effective hedging by a merchant, is also essential in the case of a tanner who wishes to hedge against orders received. For a tanner

effectively to hedge stocks of hides against which he has no orders, an even further correlation is required. In such an instance, there must be close correlation not only between prices of hides and of hide futures but also between the prices of leather and of hide futures. If a tanner should wish to hedge unsold stocks of finished leather, furthermore, this correlation between leather prices and prices of hide futures would be essential.

The data on hide prices and leather prices presented in the case show a general tendency for hide prices and leather prices to correlate, but the synchronization is not sufficiently close to enable a tanner to hedge effectively. It is probable, moreover, that the diversities between leather prices and hide futures will be even greater than the diversities between leather prices and hide spots. Under conditions of merely rough correlation between prices of leather, hides, and hide futures, hedging could be used to minimize tanners' losses from sudden severe price changes, but it is problematical whether the losses experienced as a result of day-to-day hedging transactions would not more than offset the advantages of this protection. This same observation applies to hedging operations by hide merchants under conditions of rough or uncertain correlation between prices of hide spots and hide futures. Unless hedging is followed as a consistent day-to-day policy, moreover, it defeats its own purpose, since then the question of when to hedge and when not to hedge becomes a matter of judgment or speculation, not essentially different from ordinary speculation in commodities. The conclusion that there is little likelihood that tanners can use the hide futures market effectively for hedging is supported by the experience of cotton manufacturers.<sup>10</sup>

The argument that the severity of price changes will be lessened by the operations of the futures market is naïve and fallacious. It is based on the assumption that the "outside public" will buy when the trade turns bearish and sell when the trade turns bullish. If that assumption were warranted, it would indicate that reliance was being placed upon the ignorance of the "outside public"; and if the assumption is not warranted, then the "outside public" will join the trade in being bearish or bullish as the case may be and, hence, the severity of price fluctuations will be intensified. The record of the cotton exchanges shows that prices have not been stabilized by the trading in futures.

February, 1929

M. T. C.

<sup>10</sup> See Harvard University, Bureau of Business Research, *Bulletin No. 70, A Study of Cotton Hedging for a Grey Goods Mill*, 1921-1926.





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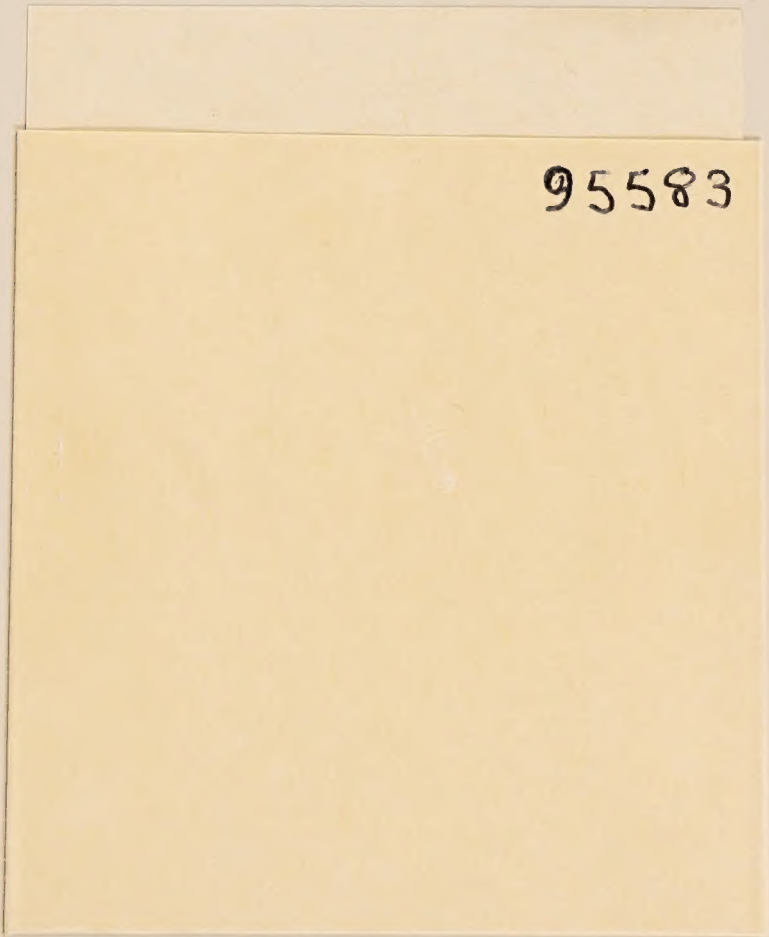
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